TRAVELTRAX DESKTOP REPORTING

Training Guide v6.5

March 26, 2013

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Agenda

Day One

1. Introductions
2. Course Objectives
3. TRAVELTRAX Overview
4. Review of the data flow
5. Understanding relational databases
6. Understanding the Data Dictionary
7. A Tour of TRAVELTRAX Desktop Reporting
    - Main Menu
    - Menu and Toolbar options
8. Running a Report
9. Profiles
10. Exercise on your own – build a Profile
11. Create a detailed Report
    - Properties
    - Query
    - Build a calculation
    - Filtering using Filter Assist
12. Create the design for a detailed report.
    - Paradox Report Design
    - Field Tool
    - Column Headings
    - Report Totals
    - Sorting in design
    - Report Header and Footer
    - Assign Report to Profile

Day Two

1. Review of yesterday

2. Create a summary Report
    - Understand Query Calc
    - Table Frame Tool
    - Build a calculation in Design
    - Add a graph

3. Create a ranking Report
    - The Rank rules
    - Use calculated field from Data Dictionary

4. Create a Batch

5. Create a multi-rank Report
    - Group Band
    - Page Break

6. Customization
    - Building a Calculation in the Data Dictionary
    - Create or modify report periods
    - Category Editor

7. Lookups
    - Build a Lookup

8. Troubleshooting and Tips
    - Export
    - Import
    - Understanding Segment Data and City Pairs

Day Three

1. Review of yesterday
2. Understanding Linking
3. Create a one-many linked Report
    - About DART sections
    - Rules of linking
    - Section filters vs. Global filters
    - Designing with “Format, Layout”
4. Create a one-many linked ranking Report
5. Create a one-one linked Report
6. Understanding Unions
7. Modify the one-one linked Report to add section
8. Working with the Data Model
9. Create a cross-tab Report
10. Directed exercises (report builds)

Day Four

1. Review of yesterday
2. Excel Designer
3. Basic Excel formulas
4. TRAVELTRAX Desktop Reporting and Excel (how they interact)
5. Introduction to macros
6. Build a two section Excel Design report with macros
7. Review / Exercise on your own

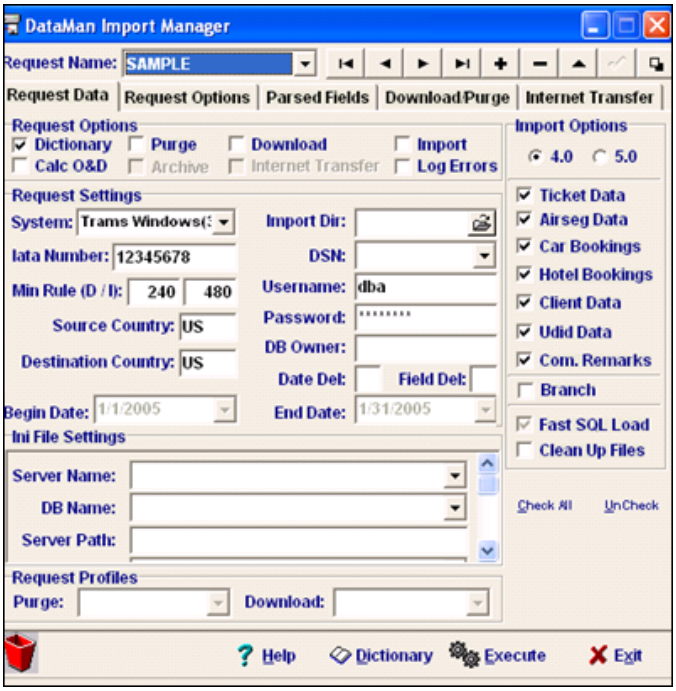
Day Five

1. TTX Portal
   - Licensing
   - Documentation
   - Support Requests
2. Incidents
3. Review of yesterday
4. Cover remaining items if required
5. Practice, Practice, Practice
6. Final Review

TRAVELTRAX Overview

Agency ETL (DataMan)

Agency ETL is the data management tool used to convert data from back-office systems into a format that TRAVELTRAX Desktop Reporting can recognize and use. The menu options in Agency ETL provide the user a high level of flexibility in customizing the way data is imported into TRAVELTRAX Desktop Reporting.



Request Options
This tab provides the ability to designate how daily car rates are derived, how the Advance Purchase Group data is calculated and Archive Options.

Parsed Fields
This Tab provides a means to parse data from an existing data field, provided by your back-office system, and place it in a reserved TRAVELTRAX Desktop Reporting field.

An example of this can be explained with the data entry Low Fare. Normally, this value resides in a field reserved for miscellaneous information like a UDID (User Defined Interface Data) or Sort field. TRAVELTRAX Desktop Reporting has a Low Fare field within its data dictionary that needs to be filled with the data from the UDID field in order to be used on a report that uses Low Fare. This is accomplished by properly filling out this Tab.

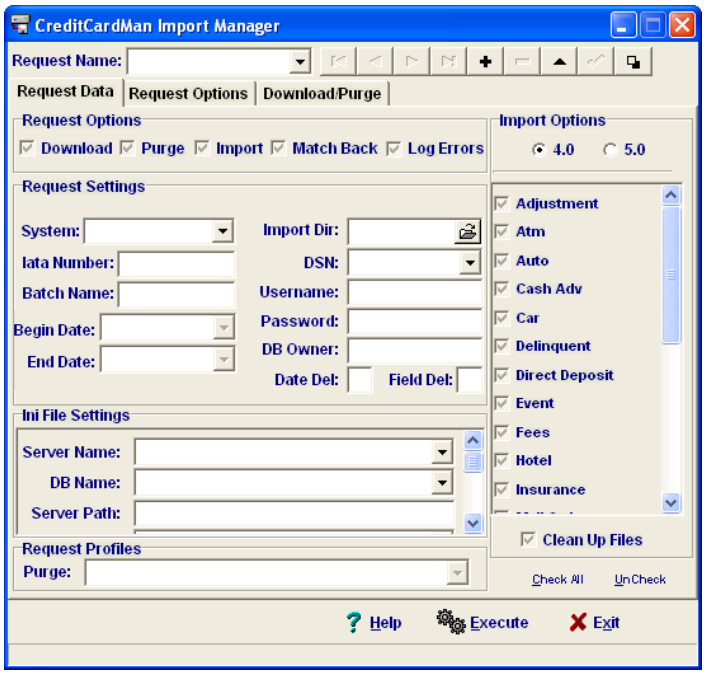
Download Purge
These options are used when performing a download directly from your back-office or purging data previously imported into the TRAVELTRAX Desktop Reporting database. Multiple profiles may be created that limit the data downloaded from the back office system or purged from the TRAVELTRAX Desktop Reporting database.

Internet Transfer
This tab permits users to utilize the Internet or Email to transfer files downloaded via Agency ETL Download.

Credit Card ETL (CreditCardMan)

Credit Card ETL is the data management tool you'll use for credit card consolidation, to perform the following functions:

1. Extract data from credit card agency-provided transaction files.
2. Import credit card transactions to the TRAVELTRAX Client database.
3. Match Booking information (Air Ticket, Car and Hotel Reservations) to Credit Card Transactions for subsequent reporting by the TRAVELTRAX Client reporting application.



- **Credit Card ETL Processing** – Detailed instructions on how to successfully use Credit Card ETL to import and/or transfer data for local or data consolidation services provided by TRX.
- **Match Process Descriptions** – A high level explanation of the processes that occur during the matching of booking information to credit card transactions.
- **Command Line Options** – A complete list of command line options for users who may want to call Credit Card ETL from other applications, such as Windows Scheduler.
- **Credit Card Record Types** – A list of all record types imported by the Credit Card ETL application into the TRAVELTRAX Client database, a well as their corresponding Industry codes and a brief description of each.

Process Scheduler (Auto Processor)

Process Scheduler is a highly scalable system for securely transferring, processing, and tracking file based data in an automated, timely, and consistent manor. It includes a number of significant enhancements that further automate manual processes, validate, track, and troubleshoot data feeds.

The Process Scheduler functions as both a set-up tool, for defining users and scheduled events, as well as for monitoring the progress of those events. A scheduled event is set up in the Auto-Processor as a Request Set, which is a set of parameters that defines the scheduled event – and includes the definition of files to be received, where to find them, where to put them, how to process them, when to process them, who to alert when the event occurs, etc.

The Process Scheduler performs 2 primary functions: it defines and monitors the receipt of Extract files from an originator, such as a credit card agency or a travel agency, and it automatically schedules and monitors the processing of those files by one of two applications – Agency ETL or Credit Card ETL. It is typically used in a Service Bureau setting. The Process Scheduler capabilities include the following:

1. Allows Data Services personnel the ability to define Users, identify their email contact information, and provide a means to enable their access to the Data Services file delivery mechanisms.

2. Monitors the receipt of data and transaction files from Travel Agencies, Credit Card providers, etc. Works in conjunction with the TRAVELTRAX FTP monitor application, as well as third party applications such as those provided by American Express for Secure Internet File Transfer (SIFT).

3. Schedules the import of those files into a central database.

4. Initiate the data import processes, including the support of ancillary processes such as data normalization, file movement, data verification, etc.

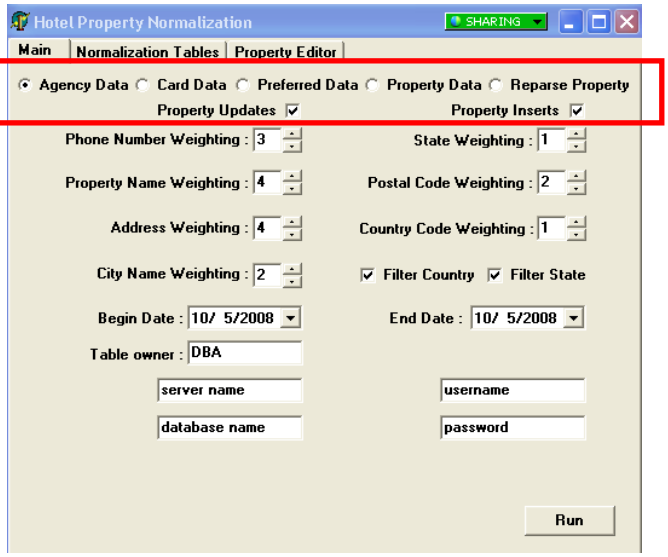
5. Provides a means for File Services Personnel to monitor the progress of each scheduled process.

6. Provides a structured logging facility to document the progress of scheduled process and to provide an audit trail that supports timely manual intervention and correction, in the event of errors.

7. Provides a means of sending electronic alerts (emails) to multiple recipients as to the receipt of files and the progress of each scheduled process.

Hotel Name Normalization

The Hotel Name Normalization tool is used to take all the different ways that a hotel property can be displayed in your data and change it into one standard hotel property name. The problem with hotel data is that it comes from many different sources and those sources don't always display the hotel information the exact same way.



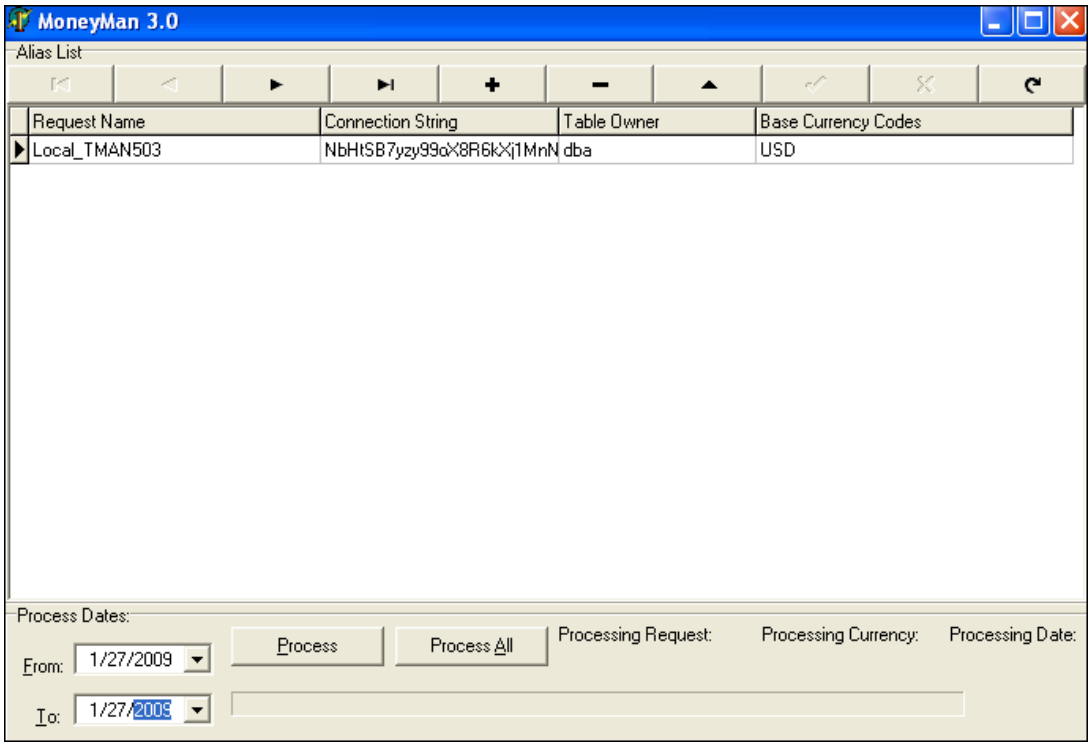
- **Agency Data** – will pull hotel information from the Hotel Table
- **Card Data** – will pull hotel information from the CCHotel and CCMerchant Tables.
- **Preferred Data** – will pull hotel information from the PreferredHotels Table.
- **Property Data** – will pull hotel information from the HotelProperty Load Table.
- **Reparse Property** – This process will reparse the tokens in the HotelProperty table that are used in the matching process.

Property Updates check box – Will caus the HotelProperty table to be updated with the information from the source data if the source data field has more information.

Property Inserts check box - This inserts new properties into the HotelProperty table.

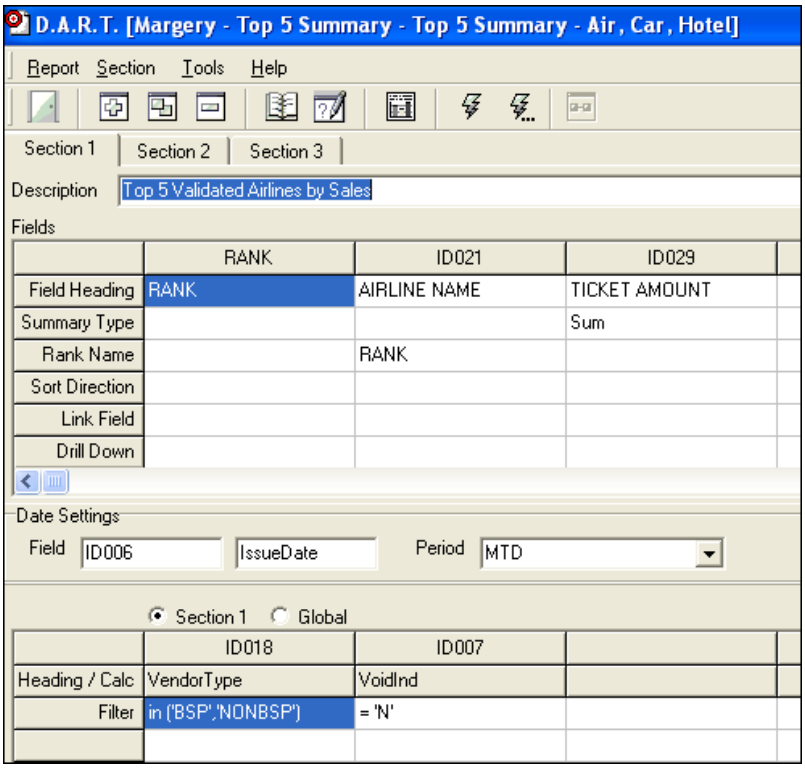
Currency Converter (MoneyMan)

Currency Converter is a tool that will allow a user to enter currency code tables in their TRAVELTRAX Desktop Reporting tables for specific dates.



TTX Desktop Reporting (TravelMan)

TRAVELTRAX Desktop Reporting is a data reporting tool. This tool allows your company to build your own reports, as well as build profiles, lookup lists and batches. You will also be able to customize things such as reporting periods, category names, and corporate structures.


D.A.R.T. [Margery - Top 5 Summary - Top 5 Summary - Air, Car, Hotel]
Report Section Tools Help
Section 1 Section 2 Section 3
Description Top 5 Validated Airlines by Sales
Fields
RANK ID021 ID029
Field Heading RANK AIRLINE NAME TICKET AMOUNT
Summary Type Sum
Rank Name RANK
Sort Direction
Link Field
Drill Down
Date Settings
Field ID006 IssueDate Period MTD
Section 1 Global
ID018 ID007
Heading / Calc VendorType VoidInd
Filter in ('BSP','NONBSP') = 'N'

Data Quality Manager (QualityMan)

Data Quality Manager is a state of the art database management program. It complements TRAVELTRAX Desktop Reporting by providing a user friendly tool to correct, modify, or append the data displayed on your report results. Data Quality Manager fixes data at the source, before you generate your reports, saving you the time and expense of constantly redoing your work.

Example: You have a report that displays the Validating carrier code, the total ticket amount and the low fare. If you want to keep that report like it is but you want to edit it just this one time so you can run the report and **ONLY** return the following data, you can create those edits in Data Quality Manager and the results will only display the following:

- Delta Airline ticket amounts where the low fares were greater than $1000.00

  OR
- Northwest Airline ticket amounts greater than $1500.00 **AND** low fares greater than $300.00

  OR
- United Airline ticket amounts greater than $1000.00

The result set might look something like the example below:

RecordKey	IataNum	ValCarrierCode	TtlTktAmt	LowFa
1SE-84577-2-1-1	12345678	UA	2879.39	2159
1SE-84940-1-1-1	12345678	DL	1435.78	107
1SE-85461-1-1-1	12345678	DL	1394.09	1045
1SE-86336-1-1-1	12345678	DL	1864.61	1398
1SE-87165-1-1-1	12345678	NW	1543.79	1157
1SE-87166-2-1-1	12345678	NW	1543.79	1157
2DT-202212-1-1-1	12345678	UA	1207.59	905
2DT-55314-1-1-1	12345678	DL	1406.99	1055
2DT-56413-1-1-1	12345678	DL	1847.8	13

Airline Contract Management

TRX's Airline Contract Management program provides an end to end solution for companies to manage their airline contracts; from planning, performance evaluation and utilization to compliance and ROI measurement. The result is improved contracts and maximized savings through enhanced forecasting and negotiation, on-going optimization, monitoring and compliance auditing.

The foundation of the Airline Contract Management System (ACM) is TRX's ability to acquire and consolidate detail global travel spend data from virtually all travel data sources to TRX's industry leading travel management data warehouse. Traditional travel transaction data is sourced from the travel management company(s)'s back office (post trip or ticketed data) and GDS systems (pre-trip or planned travel).

ACM functions are enhanced with additional benchmark data such as QSI or Fair Market Share and vendor provided data when available (flown or lifted data). The ability to integrate detail level data with the terms and conditions of a company's airline agreements distinguishes TRX from all others providing airline contact management services. This important ACM feature allows travel managers to include all the variables and factors that effect performance, compliance and ultimately savings to the company. WebMan provides the ability to deliver real time, actionable information and analytics to decision makers.

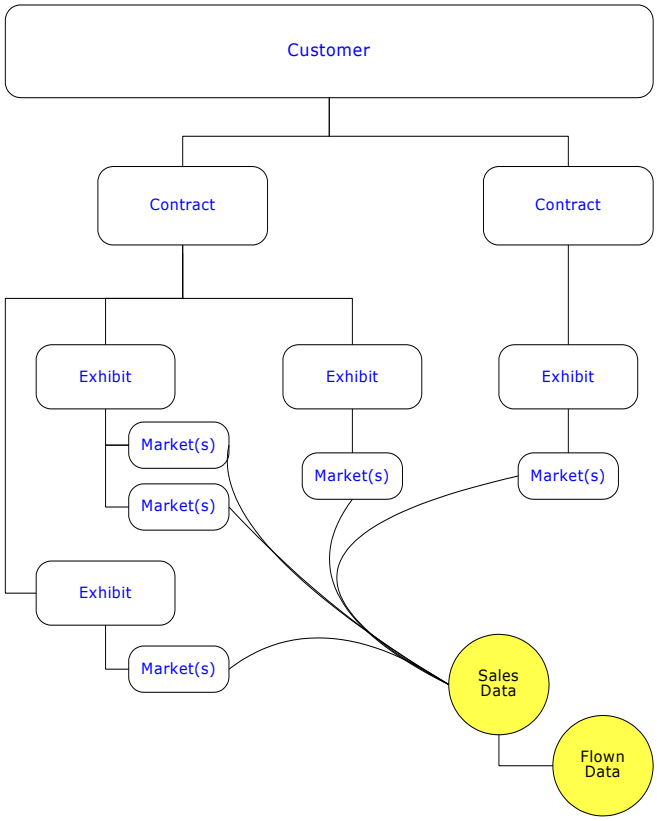
The Airline Contract Management (ACM) system is used to profile a corporation's agreements with one or more airlines. ACM is designed to accommodate multiple contracts for different airlines as well as contract with multiple airlines or airline alliances.

Each contract has one or more exhibits to define a particular type of contracted discount and performance (goals) program.

Each exhibit has one or more markets to define the city pairs and market specific rules for each exhibit.

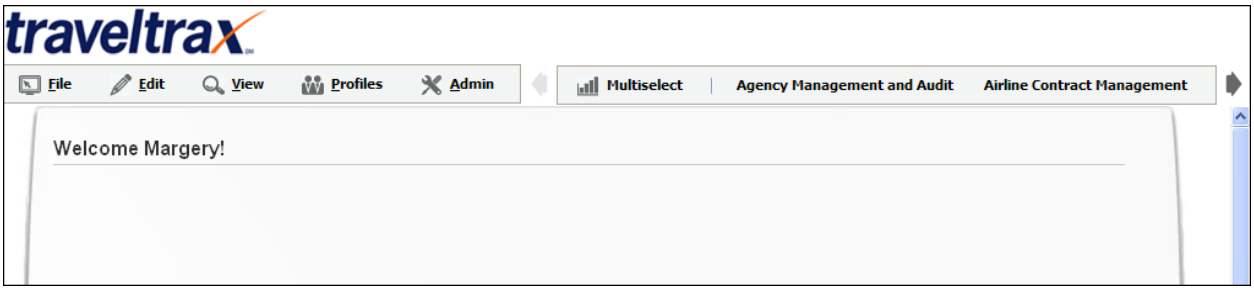
All rules defined in an exhibit apply to all markets attached to that exhibit.

Goals and discounts may be assigned to an overall contract or specific exhibits or markets.



TTX Web Reporting (WebMan)

TRAVELTRAX Web Reporting provides you the ability to access and run reports via the Internet. Reports can be run quickly to share throughout your organization or set up as automated report distributions. With Web Reporting access to your travel related information is limited only by your access to the Internet. Reports are returned to you in numerous formats, including Microsoft Excel, a Printable Document Format (PDF), Xcelsius dashboard (Adobe Flash).



Executive Overview Dashboard

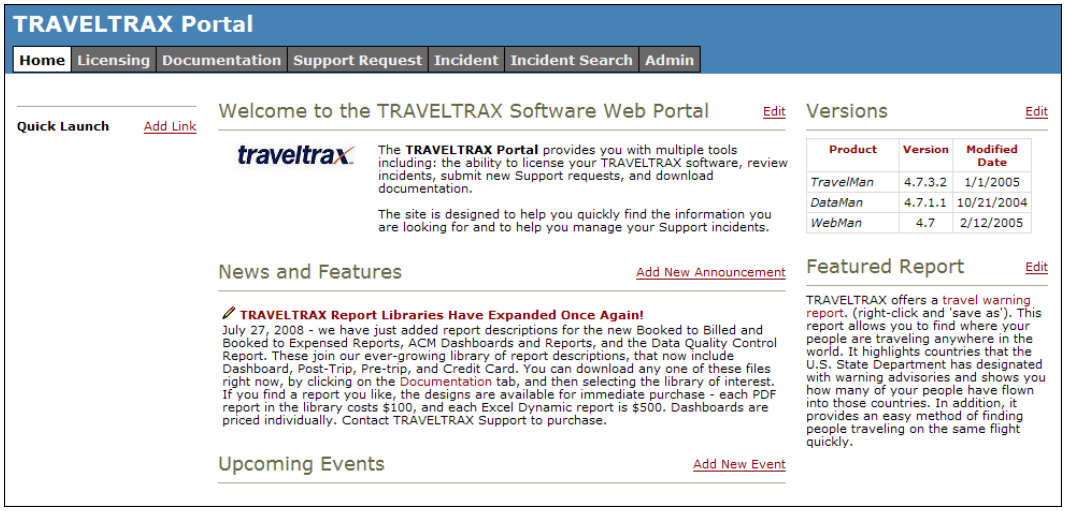
This is a multitude of reports put together into one report. Not all clients purchase this report.

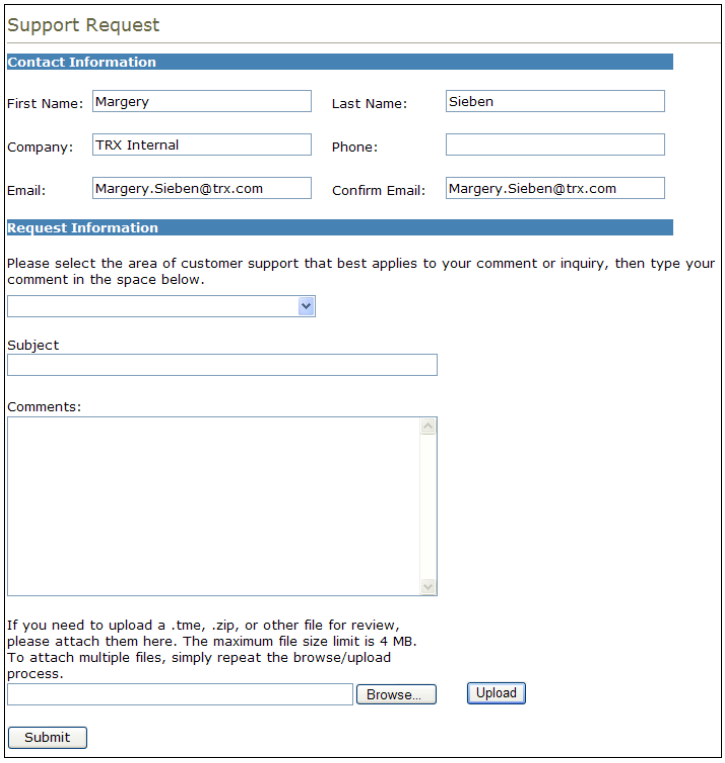
TRX Healthcare Reporting

Most of what we've already seen has been for travel information. We do also have one account that we do reporting for that has health information. The tools are the same, but the data is different.

TRAVELTRAX Portal

The TRAVELTRAX Portal is a site for our clients to use to enter a support request when they have a problem with any of the TTX applications. The client can then track the incident to find the status and communicate with the TRX Helpdesk about the incident.


TRAVELTRAX Portal
Home
Licensing
Documentation
Support Request
Incident
Incident Search
Admin
Quick Launch
Add Link
Welcome to the TRAVELTRAX Software Web Portal
Edit
The TRAVELTRAX Portal provides you with multiple tools including: the ability to license your TRAVELTRAX software, review incidents, submit new Support requests, and download documentation.
The site is designed to help you quickly find the information you are looking for and to help you manage your Support incidents.
Versions
Edit
Product
Version
Modified Date
TravelMan
4.7.3.2
1/1/2005
DataMan
4.7.1.1
10/21/2004
WebMan
4.7
2/12/2005
News and Features
Add New Announcement
TRAVELTRAX Report Libraries Have Expanded Once Again!
July 27, 2008 - we have just added report descriptions for the new Booked to Billed and Booked to Expensed Reports, ACM Dashboards and Reports, and the Data Quality Control Report. These join our ever-growing library of report descriptions, that now include Dashboard, Post-Trip, Pre-trip, and Credit Card. You can download any one of these files right now, by clicking on the Documentation tab, and then selecting the library of interest. If you find a report you like, the designs are available for immediate purchase - each PDF report in the library costs $100, and each Excel Dynamic report is $500. Dashboards are priced individually. Contact TRAVELTRAX Support to purchase.
Featured Report
Edit
TRAVELTRAX offers a travel warning report. (right-click and 'save as'). This report allows you to find where your people are traveling anywhere in the world. It highlights countries that the U.S. State Department has designated with warning advisories and shows you how many of your people have flown into those countries. In addition, it provides an easy method of finding people traveling on the same flight quickly.
Upcoming Events
Add New Event


Support Request
Contact Information
First Name:
Margery
Last Name:
Sieben
Company:
TRX Internal
Phone:
Email:
Margery.Sieben@trx.com
Confirm Email:
Margery.Sieben@trx.com
Request Information
Please select the area of customer support that best applies to your comment or inquiry, then type your comment in the space below.
Subject
Comments:
If you need to upload a .tme, .zip, or other file for review, please attach them here. The maximum file size limit is 4 MB. To attach multiple files, simply repeat the browse/upload process.
Browse...
Upload
Submit

Database Overview

PNR

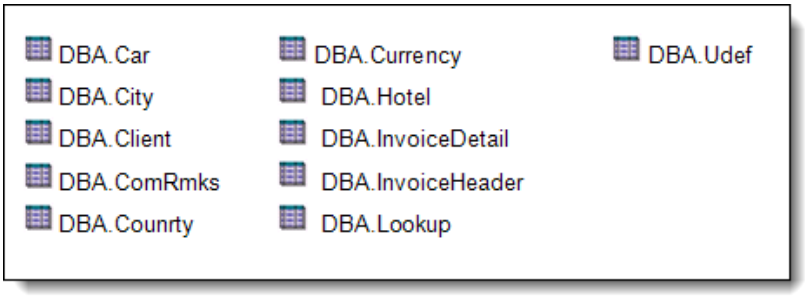
1.1HOWARD/JOHN S*110158-C85412
1 CO1687T 30JAN M SEAIAH*HK1 622A 1230P HRS /DCCO*ABQXNQ /E X
2 CO1079T 30JAN M IAHSAT*HK1 245P 351P HRS /DCCO*ABQXNQ /E O
3 CAR ZL 30JAN M HK1 SAT/03FEB/FCAR/ARR-4P/ID-78607 /DCZL
7471/CD-5555501/RET-5A/RG-¤USD39.50 UNL DY XD39.50 UNL XH13.17
UNL/AP-¤USD209.30 UNL 4DY 0HR 51.30MC/BS-26582183/RC-J2429/CF-6
70967723COUNT-
4 HHL ES HK1 SAT IN30JAN M-OUT03FEB 4NT 117734 EM /DCES
BASSY SUITES RIVE 1A0CA1X -1/ 164.00USD/AGT26582183/GCA5569240
000269179EXP 11 15-HOWARD/ID-244434061/CD-0001636000/C24H/ARR-1
551/DEP-0530/SI-RQ KING BD.SMK RM-CF-88002720-
5 CO1136T 03FEB F SATIAH*HK1 530A 629A HRS /DCCO*ABQXNQ /E X
6 CO1705T 03FEB F IAHSEA*HK1 920A 1211P HRS /DCCO*ABQXNQ /E O
7 OTH AA 03MAY Q GK1 COMMENTS/BOEING TRAVEL APPRECIATES YOUR

TICKET RECORD
INV:**2886517** CUST:412600 PNR:FSLQOT
TKT:**0058737956395** ISSUED:**23JAN12** PCC:9S20 IATA:26582183
NAME:**HOWARD/JOHN** FF:COXW928381
NAME REF:110158-C85412 TOUR ID:800JV
FOP: **CAXXXXXXXXXXXX9211*XXXX /052641 S**

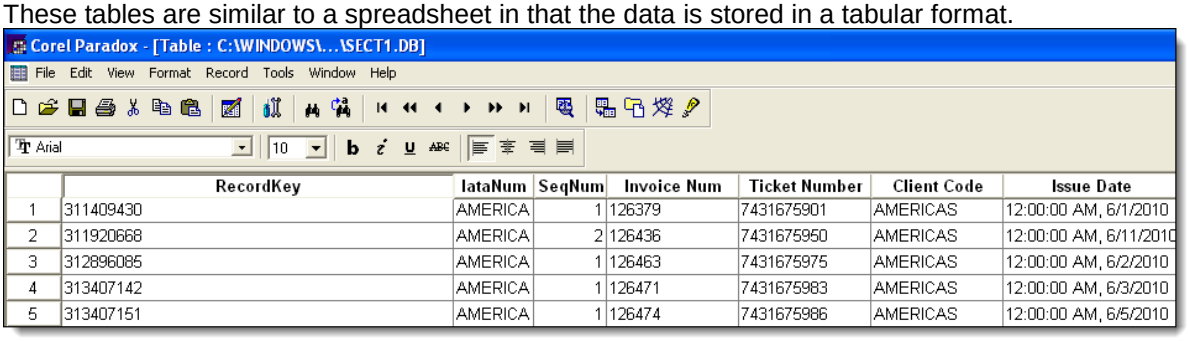
CPN	A/L	FLT	CLS	DATE	BRDOFF	TIME	ST	F/B	STAT
1	CO	1687	T	30JAN	SEAIAH	622A	OK	TA7KN/8N02	OPEN
2	CO	1079	T	30JAN	IAHSAT	245P	OK	TA7KN/8N02	OPEN
3	CO	1136	W	03FEB	SATIAH	530A	OK	LA7KN/8N02	OPEN
4	CO	1705	W	03FEB	IAHSEA	920A	OK	LA7KN/8N02	OPEN

RELATIONAL DATABASES

TRAVELTRAX Desktop Reporting retrieves the data it displays on reports from a relational database. Within a database like Tman.db there exits TABLES where the data is stored. In TRAVELTRAX Desktop Reporting those tables might look similar to the screenshot below.



These tables are similar to a spreadsheet in that the data is stored in a tabular format.



	RecordKey	IataNum	SeqNum	Invoice Num	Ticket Number	Client Code	Issue Date
1	311409430	AMERICA	1	126379	7431675901	AMERICAS	12:00:00 AM, 6/1/2010
2	311920668	AMERICA	2	126436	7431675950	AMERICAS	12:00:00 AM, 6/11/2010
3	312896085	AMERICA	1	126463	7431675975	AMERICAS	12:00:00 AM, 6/2/2010
4	313407142	AMERICA	1	126471	7431675983	AMERICAS	12:00:00 AM, 6/3/2010
5	313407151	AMERICA	1	126474	7431675986	AMERICAS	12:00:00 AM, 6/5/2010

- Each column in a table is referred to as a DATA FIELD.
- Within each table you will normally find many data fields.
- Each data field must have a unique name (e.g. TicketNum, ClientCode, etc.).
- The rows are usually called RECORDS or ROWS and are made up of these unique fields.
- Within each data field, the values for the rows are stored.
- Each record contains a complete set of data for a specific occurrence. In the example above, each row represents an individual ticket.

Primary Keys

Every table contained in a relational database must have one or more fields that will uniquely identify a record. These unique fields are called the PRIMARY KEYS. Using our example above, the primary keys for the invoice detail table is made up of the **RecordKey, IataNum, and SeqNum**.

- **RecordKey**
  Record key is a unique code assigned by the system when the data is being imported. It is used to link together various tables such as invoices to transeg, car and hotel.

- **IataNum**
  IATA number is the main IATA number for the client which is filled in at time of extract from the back office.

- **SeqNum**
  This sequence number links together the invoice header with detail records.

The purpose of these Primary Keys is critically important in a relational database structure. In the Tman.db, there are many tables (e.g. Ticket, Car, Hotel, etc.). Each of these tables contains data from thousands of invoices. However, each table contains only that portion of the invoice that is related to it. (E.g. INVOICE DETAIL contains air travel data, CAR contains car rental data, and HOTEL contains data on hotel stays.) To keep track (within the relational database) of which row of invoice detail data goes with which row of car data and/or hotel data the Primary Key is used.

AIR TABLE

RecordKey	IATANUM	SeqNum	Invoice Num	Ticket Number	Client Code	Issue Date	Passenger Name
311409430	AMERICAS	1	126379	7431675901	AMERICAS	6/1/2010	Estroff/Alison M
311920668	AMERICAS	2	126436	7431675950	AMERICAS	6/11/2010	Edwards/Stephen
312896085	AMERICAS	1	126463	7431675975	AMERICAS	6/2/2010	Blake/George
313407142	AMERICAS	1	126471	7431675983	AMERICAS	6/3/2010	Chappell/Bill
313407151	AMERICAS	1	126474	7431675986	AMERICAS	6/5/2010	Diaz/Manuel

HOTEL TABLE

RecordKey	IATANUM	SeqNum	Invoice Num	Passenger Name	Room Type	Chain Name
311409430	AMERICAS	1	126379	Estroff/Alison	REG	MARRIOTT HOTELS
313407157	AMERICAS	1	126477	Hunt-Michael	A05	HILTON INTERNATIONAL
313407160	AMERICAS	1	126478	Finnigan-Michael	KNG	HYATT HOTELS
313542394	AMERICAS	1	126496	Foreman-Frank	A0R	HILTON/CONRAD HOTELS
312896085	AMERICAS	1	126463	Blake/George	N6V	WORLD HOTELS/RESORTS
07091806427AX	AMERICAS	1	423195	CEMPBILL-JUSIPH	SGLB	CONCORDE HOTELS
07091806427AX	AMERICAS	1	423195	CEMPBILL-JUSIPH	SGLB	DORCHESTER GROUP

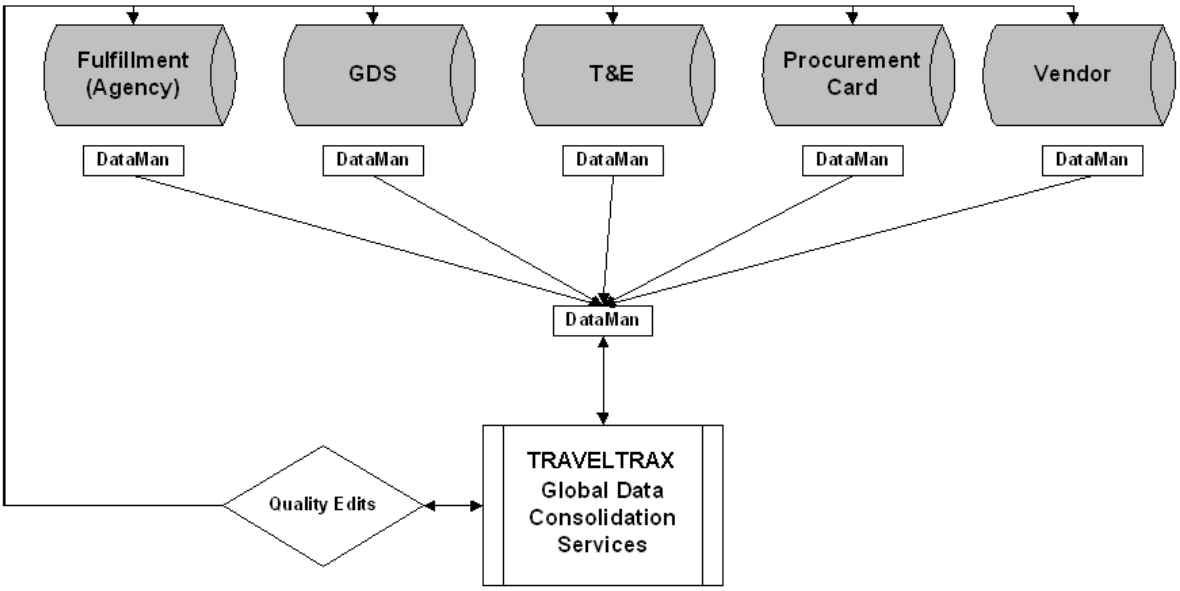
CAR TABLE

RecordKey	IATANUM	SeqNum	Invoice Num	Passenger Name	Car Type	Car Chain Code
311409430	AMERICAS	1	126379	Estroff/Alison	IC	ZE
313542381	AMERICAS	1	126491	Dunkin/David	EC	ZE
313542426	AMERICAS	1	126508	Edgar/Brian	SC	ZE
315332094	AMERICAS	1	126610	Blair/James	EC	ZE
315393131	AMERICAS	1	126621	Dunkin/David	EC	ZE

To understand the relationship of the Primary Keys in the above tables, let's examine the first record in the invoice detail table. Notice that the Passenger Name field is Estroff/Alison M. When this individual booked her travel plans they called for air, car, and hotel reservations. Now look at the first record of the hotel and car tables. The Passenger Name field entries are Estroff/Alison. The middle initial M is missing. To the computer this is a different passenger.

Now look at the RecordKey, IataNum, and SeqNum of each of these records. You will see that these field entries match between the tables. Using these unique Primary Keys, the computer is able to select the matching car and hotel records that go with Alison Estroff's invoice detail (ticket) record.

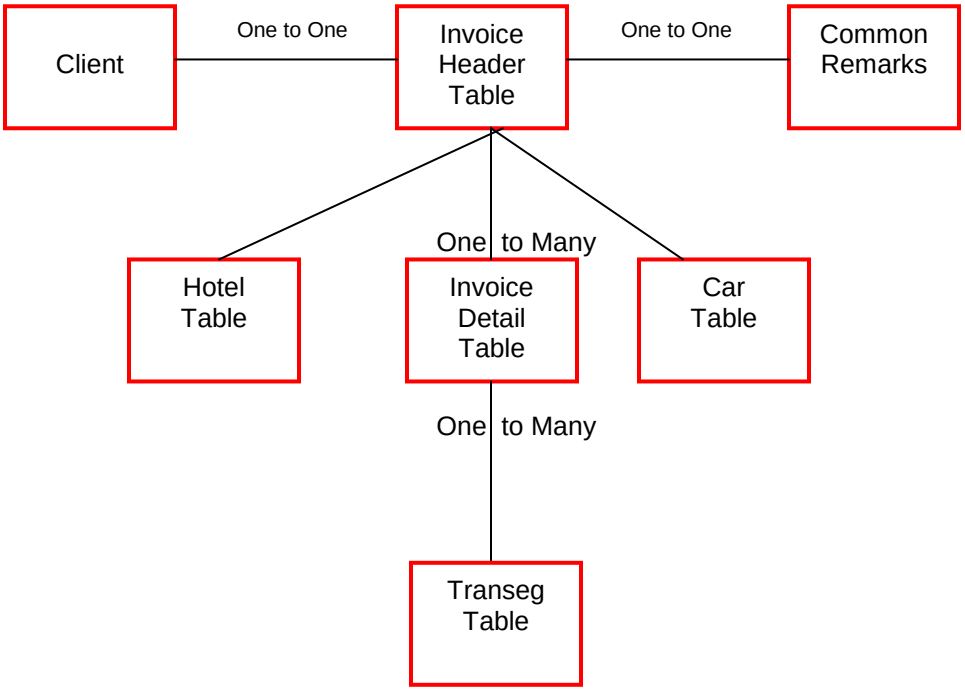
Automated Global Travel Data Consolidation



Entity Relational Diagram

This diagram shows you the basic relationship structure of our 5.03 database.

- There can only be one client (code) per invoice so there is a one to one relationship between Client and Invoice Header (a client is the company, not the passenger).
- There is only one set of common remarks per client, so there can only be on set of common remarks per invoice header.
- The Invoice Detail table holds ticket data. There can be multiple tickets per invoice, so there is a one to many relationship between Invoice header and Invoice Detail.
- There can be multiple segments per ticket, so there is a one to many relationship between the Invoice Detail table and the Transeg table.
- There can possibly be more than one car and/or hotel per invoice so there is a one to many relationship between the Car table and the Invoice Header table and between the Hotel table and the Invoice Header table.



Configuring ODBC and BDE

Overview

Microsoft SQL Server

Data is stored in databases. The data in a database is organized into the logical components visible to users. Each instance of SQL Server has one or more user databases. Your organization likely has only one user database containing all your post-ticketed data.

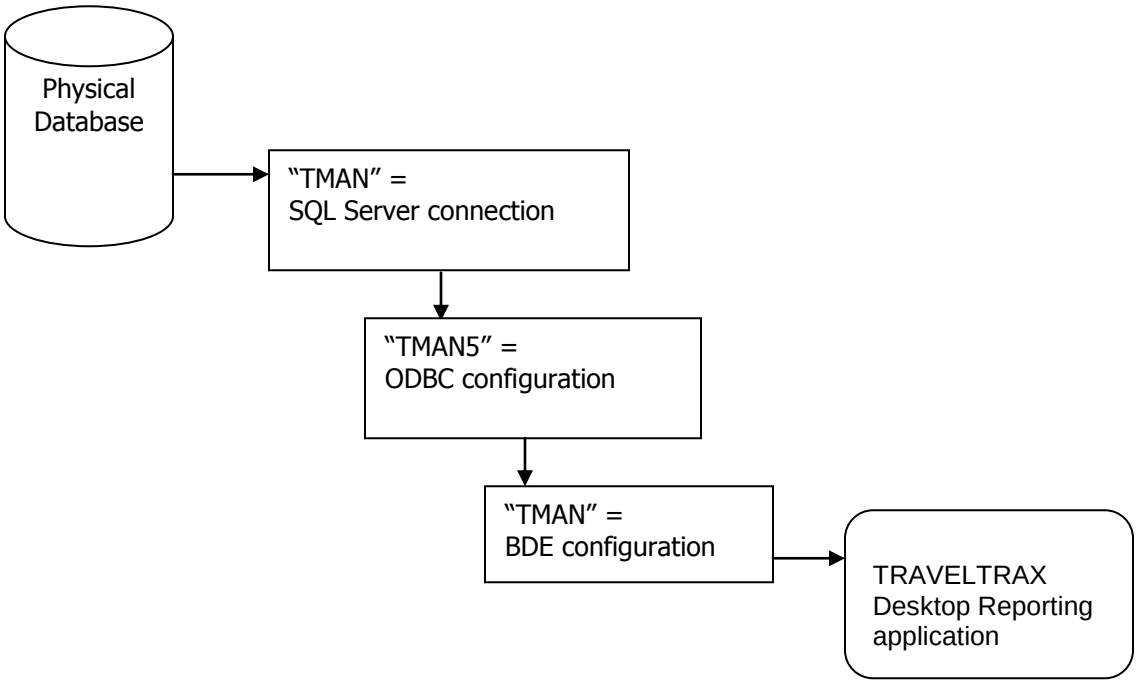
When connecting to an instance of SQL Server, your connection is associated with a particular database on the server. In the normal TRAVELTRAX Desktop Reporting installation, this database connection is typically called “TMAN”.

ODBC

ODBC - **O**pen **D**atabase **C**onnectivity is a database access standard that permits applications to connect to a variety of external database servers and other sources of data. ODBC's goal is to provide seamless access to enterprise data. The ODBC data source name (**DSN**) will refer to the configuration that connects to your SQL Server (“TMAN”).

BDE

The TRAVELTRAX Desktop Reporting application is written in a programming language called Delphi. Delphi is made by a company called Borland. The Borland Database Engine (BDE) is what Delphi uses to access desktop and client/server databases. The BDE alias refers to the configuration that connects to your ODBC data source name. It is the BDE alias that is used within the TRAVELTRAX Desktop Reporting application to recognize the database.



Layer Names

When connecting to a client, you have three possible connections: a connection to the data layer, the meta layer, and the system layer. See below for an explanation of what each layer houses:

- **Data Layer**
  The data layer holds the clients actual data. Once their data is loaded and goes through Agency ETL, it is held on their data layer.

- **Meta Layer**
  The meta layer holds the Metadata. Metadata consists of the system files required for application operation. It houses the Report Name, Report Definition, Report Design, Data Dictionary, and Calculations. A table that lists all the tables that make up the database would be considered Metadata.

- **System Layer**
  The system layer holds Systemdata. Systemdata consists of the information required to run the Web Reporting site for the client. It houses the Users and their Settings, the Meta Layer names and settings, the Entity Layer names and settings, as well as the client's usage information (who ran what reports and what dates they ran those reports).

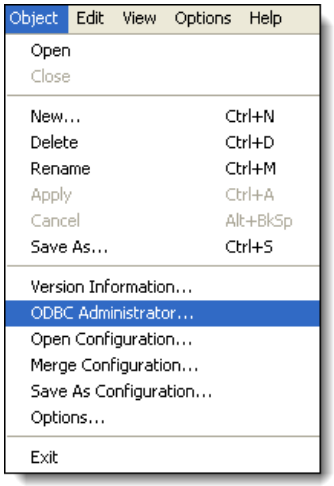
Configure ODBC

In this step you are creating the connection to the server as well as a connection to the client's database on that server.

1. On your Desktop, click the **BDE Administrator** icon (if it's not on your desktop, go to Start – Control Panel).

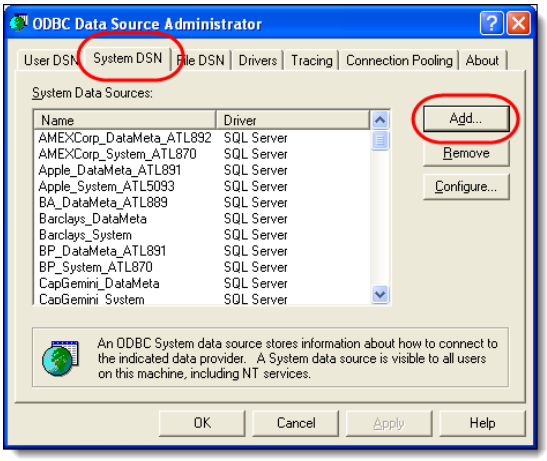
2. From the menu bar, select **Object** (or right-click on the Database tab) and select **ODBC Administrator**.

- If you don't see these options when selecting Object on the menu bar, make sure that you're on the Databases tab. If you're not, click on the Databases tab and do this again.



3. From the ODBC Data Source Administrator window, select the **System DSN** tab.

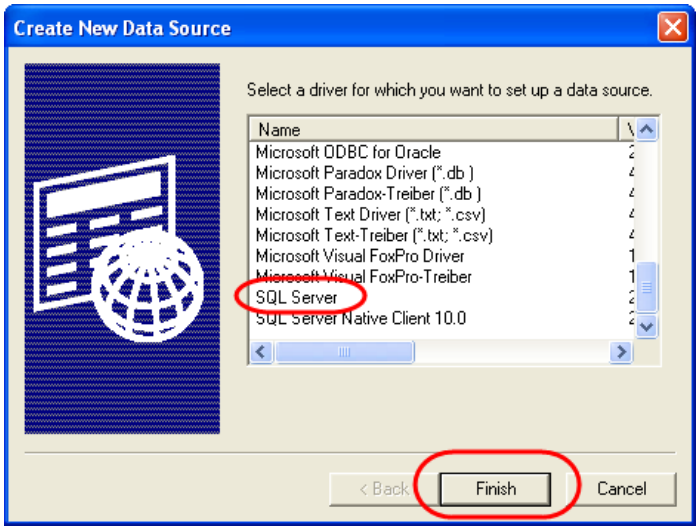
4. Select the **Add** button.



Configure ODBC continued

5. Select the driver for which you want to set up a data source - **SQL Server**.

6. Select the **Finish** button.



7. In the Create a New Data Source to SQL Server window, give the data source a name.

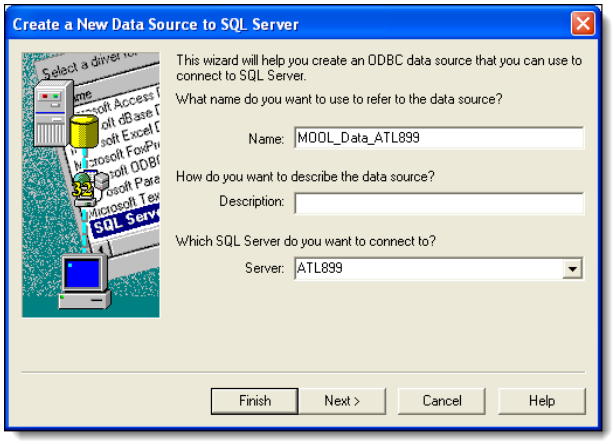
- Our standard naming convention is *client's name_ layer name_ Server number* (example: MOOL_Data_899).

- If the data and meta layers are on the same server and have the same database name, you can create one connection for both of them. Just put that information in the name (example: MOOL_DataMeta_899)

8. Enter a description (optional).

9. Enter the server name or select the server from the drop-down list. ***NOTE***: If you don't know the server number/name, contact your network administrator or TRAVELTRAX technical support.

10. Select the **Next** button.

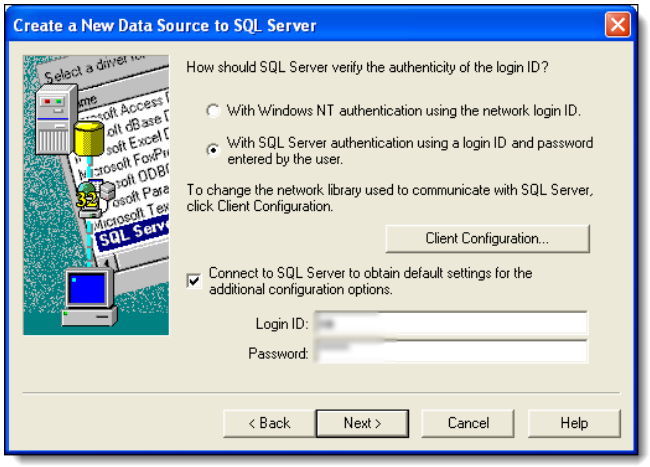

Create a New Data Source to SQL Server
This wizard will help you create an ODBC data source that you can use to connect to SQL Server.
What name do you want to use to refer to the data source?
Name: MOOL_Data_ATL899
How do you want to describe the data source?
Description:
Which SQL Server do you want to connect to?
Server: ATL899
Finish
Next >
Cancel
Help

Configure ODBC continued

11. There are two options under 'How should SQL Server verify the authenticity of the login ID?' Use the one you need for your company.

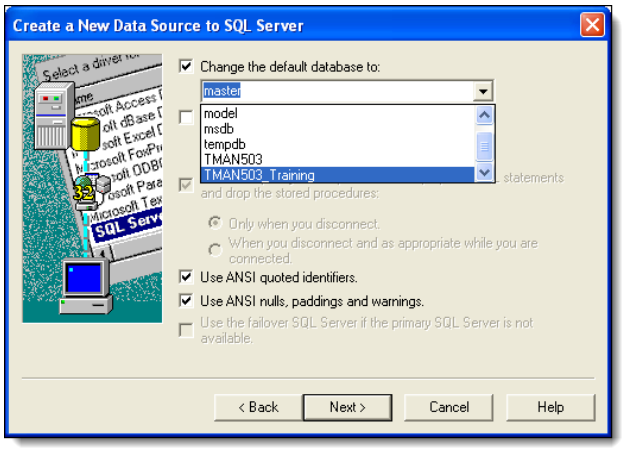
- **Windows NT** – This option will use your network login & password to check and see if you have permission to connect to the server you added.
- **SQL Server authentication** – This opens up the Login ID and Password fields to display (see screenshot below). This is the login and password to access the server you're trying to connect to. If you don't know what that is, please contact your network administrator or TRAVELTRAX Technical Support.

12. Select the **Next** button.


Create a New Data Source to SQL Server
How should SQL Server verify the authenticity of the login ID?
With Windows NT authentication using the network login ID.
With SQL Server authentication using a login ID and password entered by the user.
To change the network library used to communicate with SQL Server, click Client Configuration.
Client Configuration...
Connect to SQL Server to obtain default settings for the additional configuration options.
Login ID:
Password:
< Back
Next >
Cancel
Help

13. Select the **Change the default database to** checkbox.

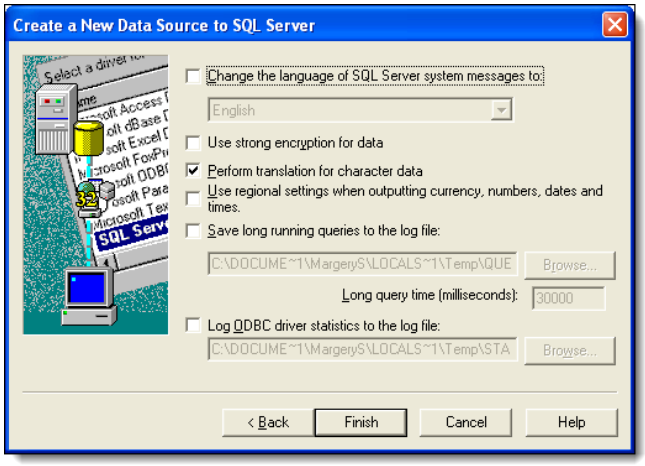
14. From the drop-down list, select the name of your TRAVELTRAX database.



15. Select the **Next** button.

Configure ODBC continued

16. On the next screen, select **Finish**.



17. On the final screen, select the **Test Data Source** button.

- If the configuration is properly test up, you will be rewarded with a message that reads, 'TESTS COMPLETED SUCCESSFULLY'.
- If you do not receive this message, review your steps to reconfigure the ODBC connection. If you need assistance, contact your network administrator or TRX Technical Support.

18. Select **OK** on the following screens until you return to the BDE administrator window.

19. Repeat these steps for every connection you need to make. You can possibly have 3 connections; one for the data layer, one for the meta layer, and one for the system layer).

NOTE: If your data and meta layers are on the same server and have the same database name, you can create one connection for both layers.

The ODBC has now been established. Next, we have to configure BDE.

Configure BDE

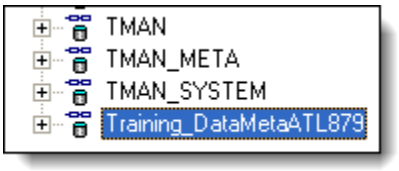
Normally, your system is built with 3 BDE aliases as defaults: **TMAN** for the data layer, **TMAN_META** for the meta layer, and **TMAN_SYSTEM** for the system layer. You can use these BDE aliases and just point your connections to them, or you can create new BDE aliases for each of your layers.

To create a BDE alias, follow the steps below:

Create BDE Alias

1. In the BDE window, click on the **Databases** tab. You should see your ODBC aliases.
   - If your ODBC alias does not appear, right-click on the Databases tab and select Refresh (or close and reopen BDE).

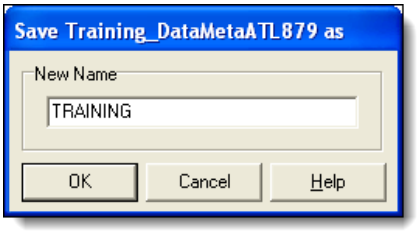
2. Right-click on the ODBC alias name for the correct layer.



3. Select **Save As…**

4. The Save as window defaults to show the same name. Change the name to the BDE name you want displayed (see example below).

5. Select **OK**.



Configure BDE continued

Make sure the settings for this BDE are correct by going through the following steps:

Definitions of BDE

6. The new BDE alias name is now included in the list. Click on the BDE alias to display the definitions (settings).

7. On the **Definition** tab, change the parameters for the following::
   - BLOB SIZE = 1000
   - BLOBS TO CACHE = 1024

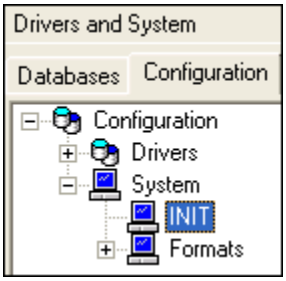
Type	SQL Server
BATCH COUNT	200
BLOB SIZE	1000
BLOBS TO CACHE	1024
DATABASE NAME	
ENABLE BCD	FALSE
ENABLE SCHEMA CACHE	FALSE
LANGDRIVER	
MAX ROWS	-1
ODBC DSN	Repository_DM_879
OPEN MODE	READ/WRITE
ROWSET SIZE	20
SCHEMA CACHE DIR	
SCHEMA CACHE SIZE	8
SCHEMA CACHE TIME	-1
SQLPASSTHRU MODE	SHARED AUTOCOMMIT
SQLQRYMODE	
USER NAME	

8. Repeat steps 6-7 for each BDE alias.

9. Select the **Configuration** tab.

10. From the Configuration tab, expand Systems by clicking the plus sign (+) to the left of it.

11. Click on **INIT**.



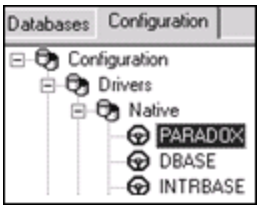
Configure BDE continued

12. On the Definition tab, change the parameters as follows:
- LOCAL SHARE = **FALSE**
- MAXBUFSIZE = **16384**
- MAXFILEHANDLES = **512**
- MEMSIZE = **205**
- MINBUFSIZE = **2048**
- SHAREDMEMLOCATION = **4E90**
- SHAREDMEMSIZE = **65536**

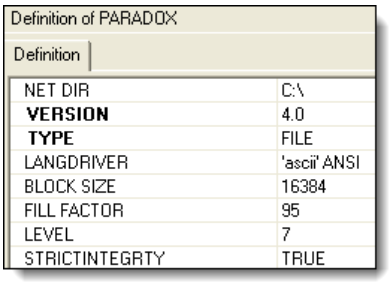
AUTO ODBC	FALSE
DATA REPOSITORY	
DEFAULT DRIVER	PARADOX
LANGDRIVER	Paradox 'ascii'
LOCAL SHARE	FALSE
LOW MEMORY USAGE LIMIT	32
MAXBUFSIZE	16384
MAXFILEHANDLES	512
MEMSIZE	205
MINBUFSIZE	128
MTS POOLING	FALSE
SHAREDMEMLOCATION	4E90
SHAREDMEMSIZE	65536
SQLQRYMODE	
SYSFLAGS	0
VERSION	4.0

13. From the Configuration tab, expand Configuration, Drivers, and Native by clicking the plus sign (+) to the left of each.

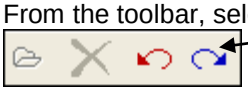
14. Select **Paradox**.



15. On the Definition tab, change the parameters as follows:
- NET DIR C:\Users\Public (Windows7)
  C:\ (Windows XP)
- BLOCK SIZE 16384
- LEVEL 7



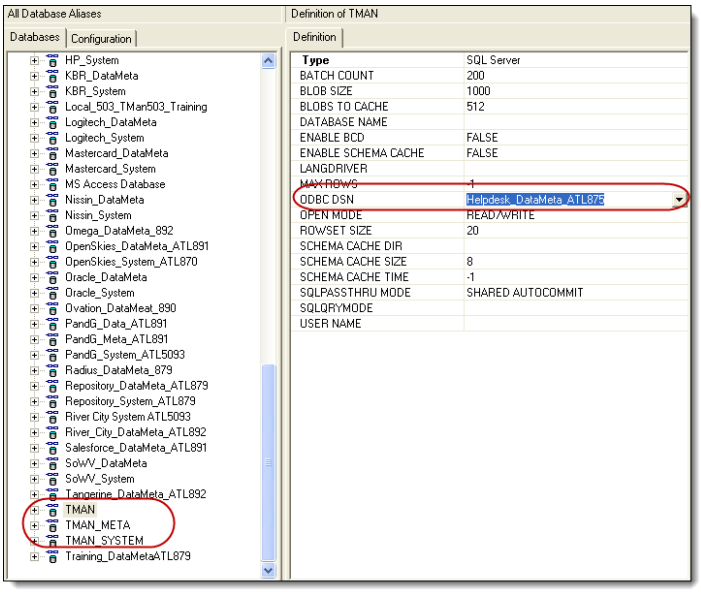
16. From the toolbar, select the **Apply** icon (blue right-curved arrow)



Point BDE aliases to ODBC connections

In order to connect to the correct server and database, your BDE aliases need to be pointed to the correct ODBC connections. Follow the steps below to point the BDE aliases to the correct ODBC connections for all layers needed:

1. Click on the BDE alias for your **data** layer (example: TMAN).
2. Click on the ODBC DSN in the right column.
3. Click the drop down and select the correct connection for the data layer for this client.
4. Click the apply button and click OK.
5. Click on the BDE alias for your **meta** layer (example: TMAN_META)
6. Click on the ODBC DSN in the right column.
7. Click the drop down and select the correct connection for the meta layer for this client.
8. Click the apply button and click OK.
9. Click on the BDE alias for your **system** layer (example: TMAN_SYSTEM).
10. Click on the ODBC DSN in the right column.
11. Click the drop down and select the correct connection for the system layer for this client.
12. Click the apply button and click OK.



NOTE: If you only have one ODBC connection for both the data and the meta layer, you still have to connect the BDE alias for the data layer and the BDE alias for the meta layer to that connection.

NOTE: You'll always have one BDE alias for the data layer and one for the meta layer.

Create Reports

Introduction

TRAVELTRAX Desktop Reporting is a data reporting tool. This tool allows your company to build your own reports, as well as build profiles, lookup lists and batches. You will also be able to customize things such as reporting periods, category names, and corporate structures.

During implementation, TRX will work with you to download and configure everything needed for this system to work. TRX will also work with your company to create your Data Dictionary according to your unique data.

During this training, you will learn how to do the following:

- Create queries
- Design reports using the Paradox design tool (PDF)
- Create Profiles
- Create and run Batches
- Create a Lookup
- Create a List that can be used when creating your query
- How to customize your category names and reporting periods
- How to Import and Export reports for troubleshooting

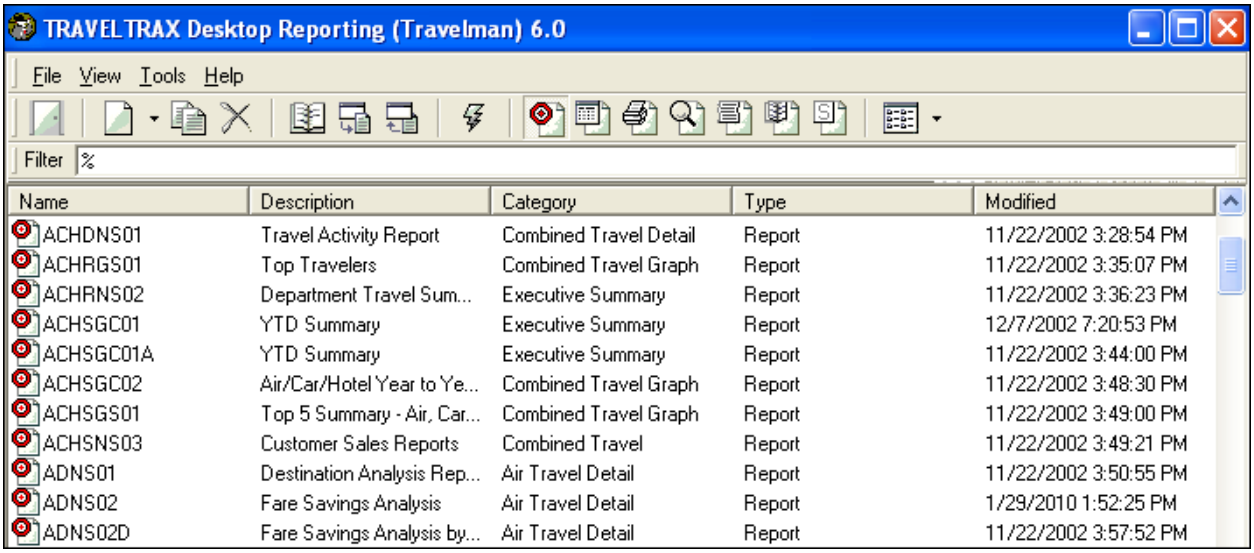
NOTE:
The training will be conducted using a training database and will, therefore, not have the same Data Dictionary as your company.

Main Menu Overview

The Main Menu is the primary operating screen for TRAVELTRAX Desktop Reporting. From it, you initiate most of the main functions within the program. It provides an easy to read platform that displays information in a standard windows format; customizable to your needs.

The following information is provided to enhance the learning process within the TRAVELTRAX training environment. If you require detailed information about a specific TRAVELTRAX function, please refer to the TRAVELTRAX User Guide.

Main Menu


TRAVELTRAX Desktop Reporting (Travelman) 6.0
File View Tools Help
Filter %
Name Description Category Type Modified
ACHDNS01 Travel Activity Report Combined Travel Detail Report 11/22/2002 3:28:54 PM
ACHRGS01 Top Travelers Combined Travel Graph Report 11/22/2002 3:35:07 PM
ACHRNS02 Department Travel Sum... Executive Summary Report 11/22/2002 3:36:23 PM
ACHSGC01 YTD Summary Executive Summary Report 12/7/2002 7:20:53 PM
ACHSGC01A YTD Summary Executive Summary Report 11/22/2002 3:44:00 PM
ACHSGC02 Air/Car/Hotel Year to Ye... Combined Travel Graph Report 11/22/2002 3:48:30 PM
ACHSGS01 Top 5 Summary - Air, Car... Combined Travel Graph Report 11/22/2002 3:49:00 PM
ACHSNS03 Customer Sales Reports Combined Travel Report 11/22/2002 3:49:21 PM
ADNS01 Destination Analysis Rep... Air Travel Detail Report 11/22/2002 3:50:55 PM
ADNS02 Fare Savings Analysis Air Travel Detail Report 1/29/2010 1:52:25 PM
ADNS02D Fare Savings Analysis by... Air Travel Detail Report 11/22/2002 3:57:52 PM

Tool Bar

The Tool Bar is a shortcut method of performing many of the functions associated with the main menu.

Exit TRAVELTRAX – This closes TRAVELTRAX and returns to Windows.

New – This displays a drop-down list to choose new Report, Profile, Batch, Lookup, List, Dictionary, and Script.

Copy – Allows you to copy any highlighted Report, Profile, Batch, Lookup, List, Dictionary, and Script.

Delete - Allows you to delete any highlighted Report, Profile, Batch, Lookup, List, Dictionary, and Script.

Data Dictionary – Displays the master Data Dictionary (more information to follow).

TRAVELTRAX Export - Allows you to export to a directory of your choice any highlighted Report, Profile, Batch, Lookup, List, Dictionary, or Script.

TRAVELTRAX Import - Allows you to import previously exported Reports, Profiles, Batches, Lookups, Lists, Dictionaries, or Scripts.

Run – Provides a quick method to generate any highlighted report.

Toolbar continued

The following seven icons allow you to display any combination of Reports, Profiles, Batches, Lookups, Lists, Dictionaries, and Scripts in the main window.

Show Reports – Will display a list of all reports each user is allowed to see.

Show Profiles – Will display a list of all profiles each user is allowed to see.

Show Batch Requests – Will display a list of batch requests.

Show Lookups – Will display a list of lookup tables.

Show Lists – Will display customized lists that can be used when building a query

Show Dictionaries – Will display a list of dictionaries.

Show User Exit Scripts – Will display a list of exit scripts

Views – Drop-down list to choose the way you want to display your Reports, Profiles, Batches, etc. The options are:

- Large Icons
- Small Icons
- List
- Details
- Arrange (By Name, By Description, By Category, By Type, and By Date)

Menu Bar

The Menu Bar accomplishes many of the same functions as the Icon Bar, but requires more steps. However, there are other functions that are only available from the Menu Bar. A description of the functions that will be covered in training follows:

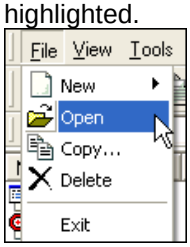
File

New – From the New icon, click on the drop-down menu to create the following:

- Reports
- Profiles
- Batches
- Lookups
- Lists
- Dictionaries
- Scripts

Open, Copy, Delete

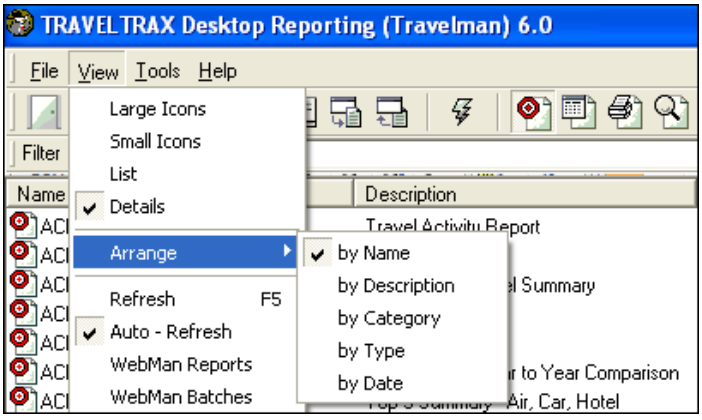
1. To open, copy, or delete a file (report, lookup, etc.), click on that file.
2. Select **File** on the menu bar.
3. Select **Open, Copy**, or **Delete**. This will either open, copy, or delete the file you have highlighted.



View

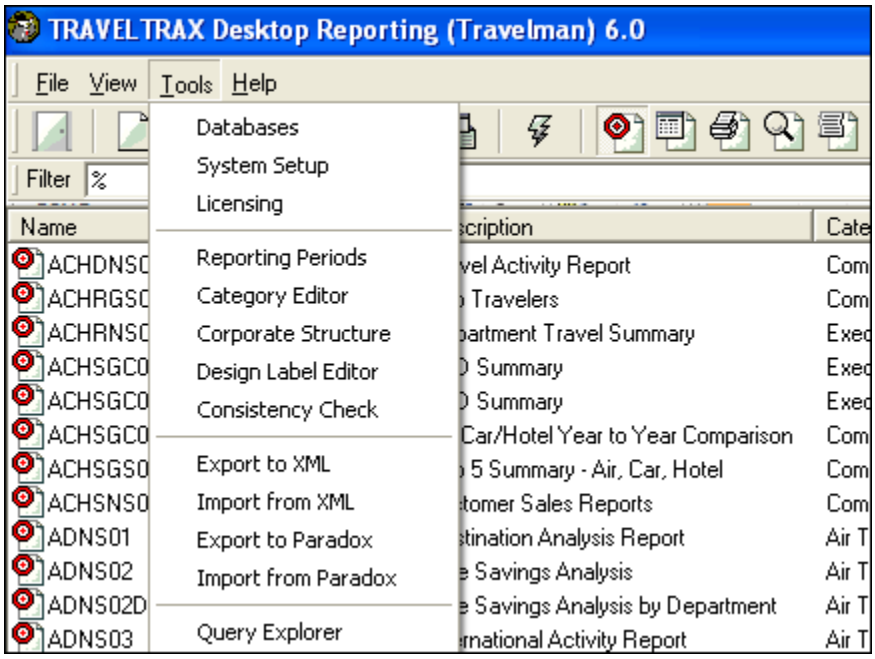
The View Drop Down list accomplishes the same function as the icons covered earlier. It changes how you display the lists of Reports, Profiles, Batches, etc.

Refresh is used to update the main window. When you create a new Report, Profile, Batch, etc. it will not be visible until you select Refresh. You can also select the F5 keyboard key.



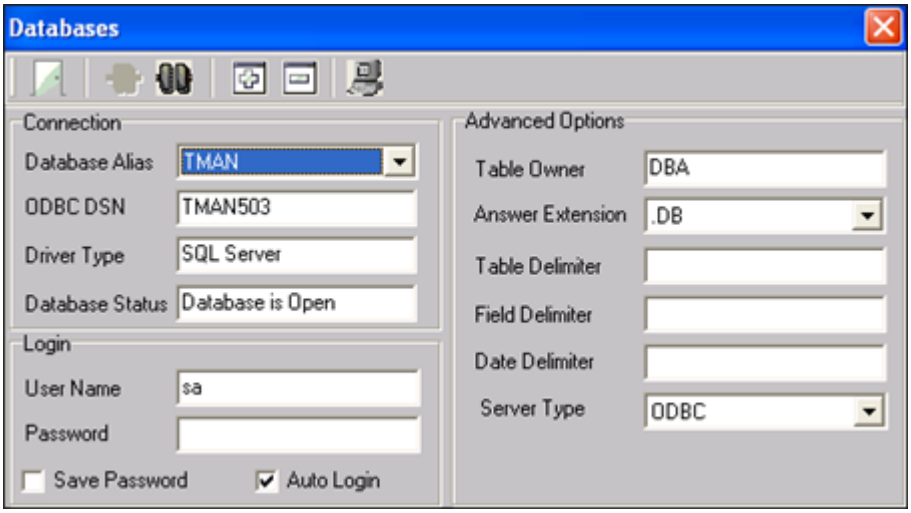
Menu Bar continued

Tools



Databases

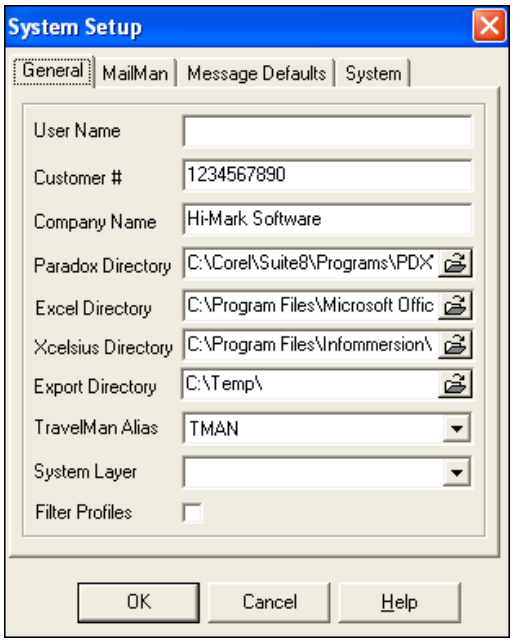
Use this window to configure the databases TRAVELTRAX is connected to. Normally, this only needs to be completed when you first install TRAVELTRAX.



Tools continued

System Setup

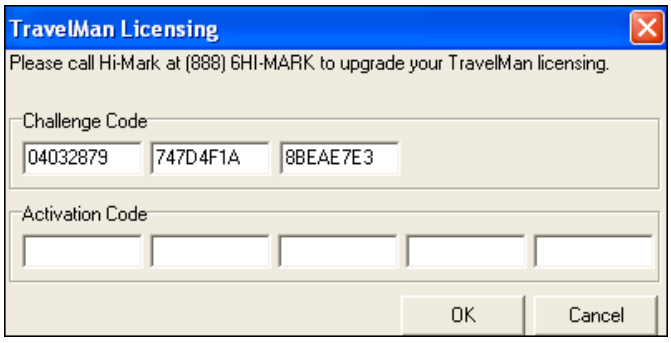
The system setup screen is also completed the first time you setup TRAVELTRAX. Much of the information is used for product identification when you are coordinating with TRX. The Export Directory is used in conjunction with Batch Generator when the destination of the report results is other than screen, printer, or e-mail.



Licensing

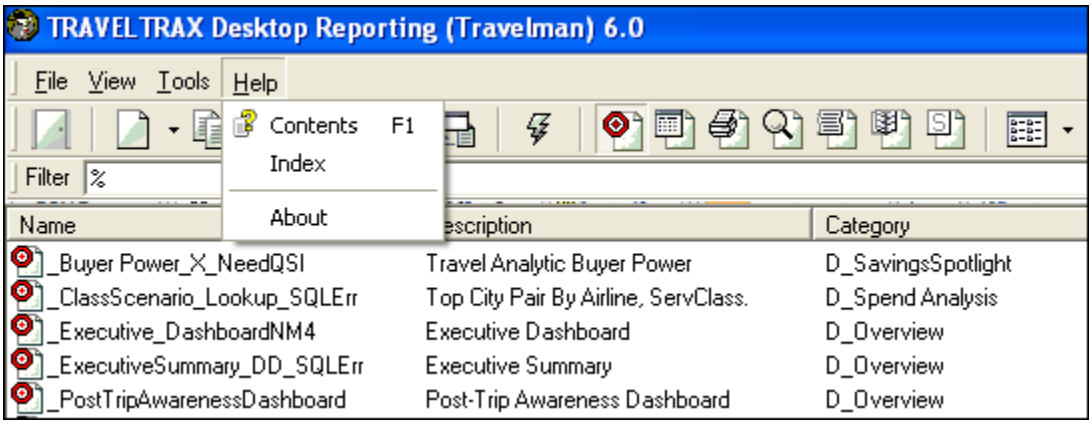
This is used during the registration of your TRAVELTRAX software. When you need to register your software,

1. Click on Tools – Licensing
2. Then go to the Portal https://portal.traveltrax.com/, click on the Licensing tab.
3. Enter the Challenge Code and click Submit.
4. You'll receive an activation code that you'll then enter here in Desktop Reporting.
5. Click OK.



Help

This is a standard Windows help menu that will assist you in finding answers to your TRAVELTRAX questions.



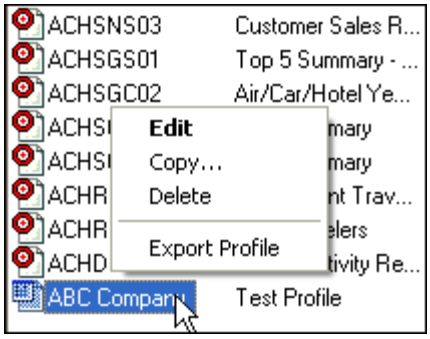
Right Clicking Options

A. When you right click on a **batch** or a **profile**, TRAVELTRAX allows you to do the following:

- **Edit** – Brings up the window associated with the item you chose so you can make changes to it.
- **Copy** – Allows you to make an exact copy of the selected item.
- **Delete** – Removes the selected item from TRAVELTRAX.
- **Export** – Activates the export window.

B. When you right-click on **Lookups and Lists**, TRAVELTRAX allows you to edit, copy, or delete.

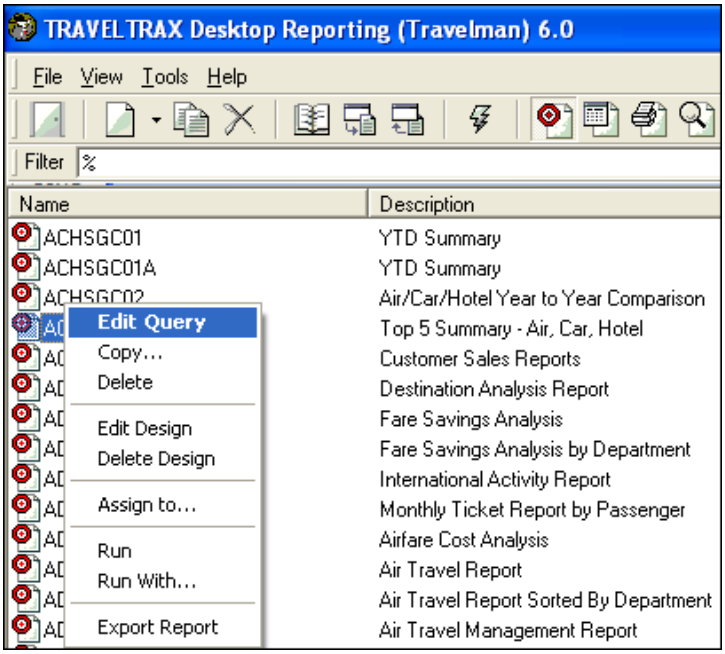
C. When you right-click on **Dictionaries**, TRAVELTRAX allows you to edit or delete.



Report Options

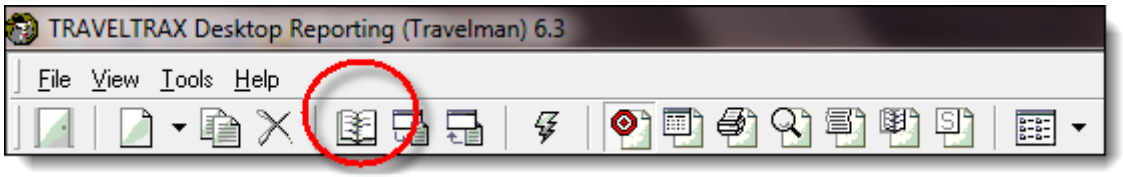
When you right-click on a report, you get a list of options associated with Reports. Many, like Copy and Delete, have already been covered. Below are the other options:

- **Edit Query** – Opens the query window for the report you have selected so you can make changes to it.
- **Edit Design** – Opens an existing report design or allows you to create a new one if one doesn't already exist.
- **Delete Design** – Deletes any existing design for the selected report.
- **Assign To** – Allows you to assign reports to existing Profiles without having to open the designated Profile.
- **Run** – Generates the selected report to the screen for the default date period you've setup in the master Reporting Periods window. This report will include data for all clients by default.
- **Run With** – Same as Run, except the report pulls data for the Profile you select.
- **Export Report** – Activates the export window.



Master Data Dictionary

The Data Dictionary is used extensively throughout TRAVELTRAX. It contains fields from each of the tables in your database. These fields directly correspond to data element columns within the table. Your company's Master Data Dictionary can be accessed from the Main Page in Desktop Reporting. Click on the Data Dictionary icon. You can then click on the Data Dictionary icon.



Example: When you use **ID021 - VendorName** in a report, you are simply asking to pull selected data from the 21st column in the Invoice Detail table of your database and the column is called VendorName.

How to use the Data Dictionary

1. To access the Data Dictionary when you're in a report, just click on the Data Dictionary icon.

2. There are 2 views:
   - The List view shows you the data fields without showing you the Table names. The data fields are grouped by their table, you just don't see the table name.
   - The Tree view shows you the Table names first. You then have to open the table and you'll see the data fields within that table. (This is what we use during class).

3. To locate a specific item in the Data Dictionary, you can either scroll down using the scroll bar or you can perform a quick locate.

4. To perform a quick locate, left click on any item in the Data Dictionary and type the first one or two letters of the field # you are looking for. This will take you to the first occurrence of the field # starting with those letters. Then just scroll down a short way to find the specific entry you're seeking.

5. Click on the data field # that you need and drag it into the report.

Profiles Overview

The building of Profiles is critical to the generation of Reports in TRAVELTRAX. If you want to run reports for a specific client, agent, group, or your company as a whole, build a Profile for that client and/or group and/or company.

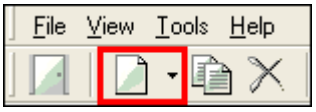
A Profile can be defined with any field from the Data Dictionary: Client codes, agent sines, passenger names, employee numbers, region codes, location names, etc…

Profiles can be defined with multiple values. For example, a profile with multiple agent codes or a Profile with multiple account numbers is a group because all data is consolidated.

Profile Exercise

In this exercise you will build a company profile based on a **location**. Let's say we want this profile for the Arlington, Va office of our company.

1. Select the **New** icon drop-down arrow.



2. Select **Profile**.

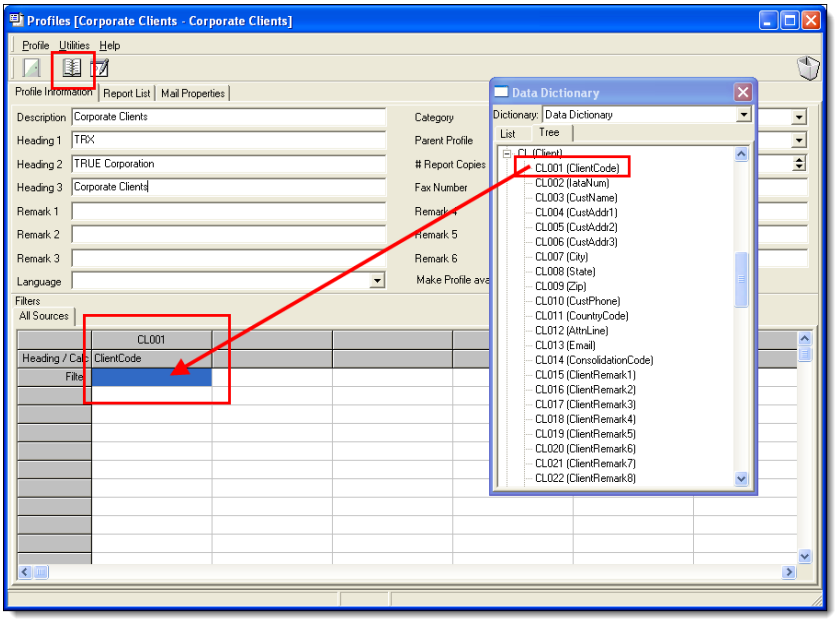
3. When the new Profile window appears, type.

4. Select **OK**.

5. Fill in the appropriate text boxes:
   a. Click in the description box and type **Arlington office.**

   b. Click in Heading 1 and type your company name.

   c. Click in Heading 2 and type your Profile Name (**Arlington**)

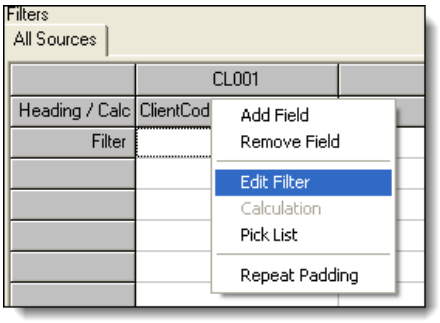


6. Click on the **Data Dictionary** icon to make it appear.

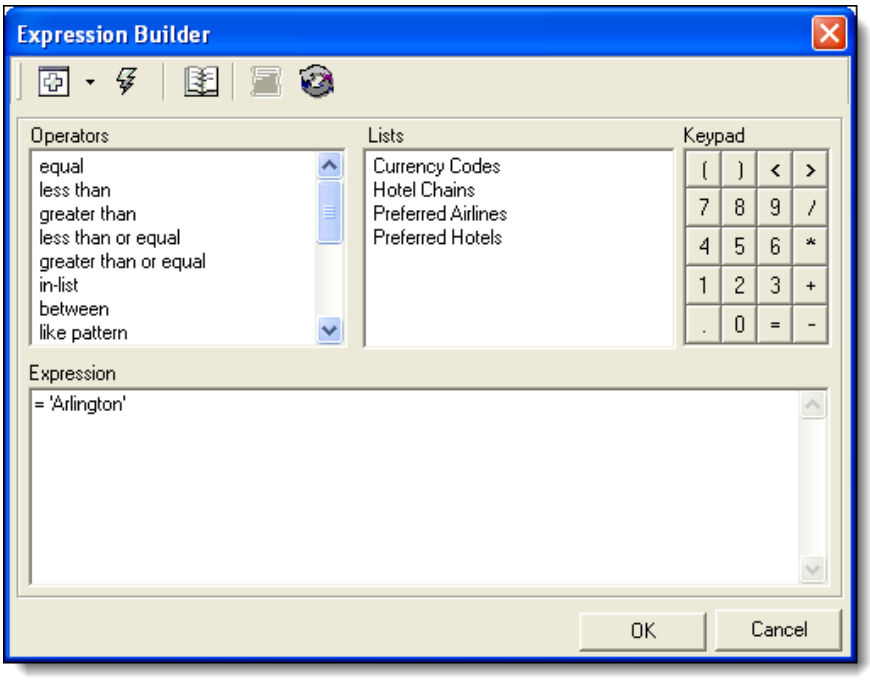
7. Using the Data Dictionary, locate **CL007 - City** and drop it in the first column of filters.

Profile Exercise continued

8. Right click on the column you just dropped CL007 into and select **Edit Filter**.



9. Type the SQL expression for one value. Type **= 'Arlington'**



10. Select **OK**.

Profile Exercise continued

Group Profile

Let's say your company does travel for many different corporate clients and you sell them a specific group of reports. You'd like a profile that will only access those corporate clients. Here is how to create a profile for more than one value.

1. Select the **New** icon and then **Profile** from the drop-down list.

2. When the New Profile window appears, type **Corporate Clients** then select **OK**.

3. Fill in the appropriate text boxes:
   - Click in Description and type **Corporate Clients**.
   - Click in Heading 1 and type your company's name.
   - Click in Heading 2 and type **Corporate Clients**.

4. Using the Data Dictionary locate **CL001 - ClientCode** and drop it in the first column of the filters window.

5. Right-click on the column you just dropped CL001 into and select **Edit Filter**.

6. In the Expression Builder window, type
   IN ('B20660','0L00854','0L00856','5R06200','6802822')

7. Click **OK**.

Reports Overview

In this class, you will learn the process of building custom reports. In each report, you will learn different procedures and techniques important in building any report. The process of learning these reports is progressive. The techniques learned in each successive report are carried over to the next report.

You will learn what the Report Properties are used for and what the Section Properties are used for. You will also learn how to add query fields and filters. Then you will learn how to use Paradox to design PDF type reports and you will learn how Excel design works with Desktop Reporting.

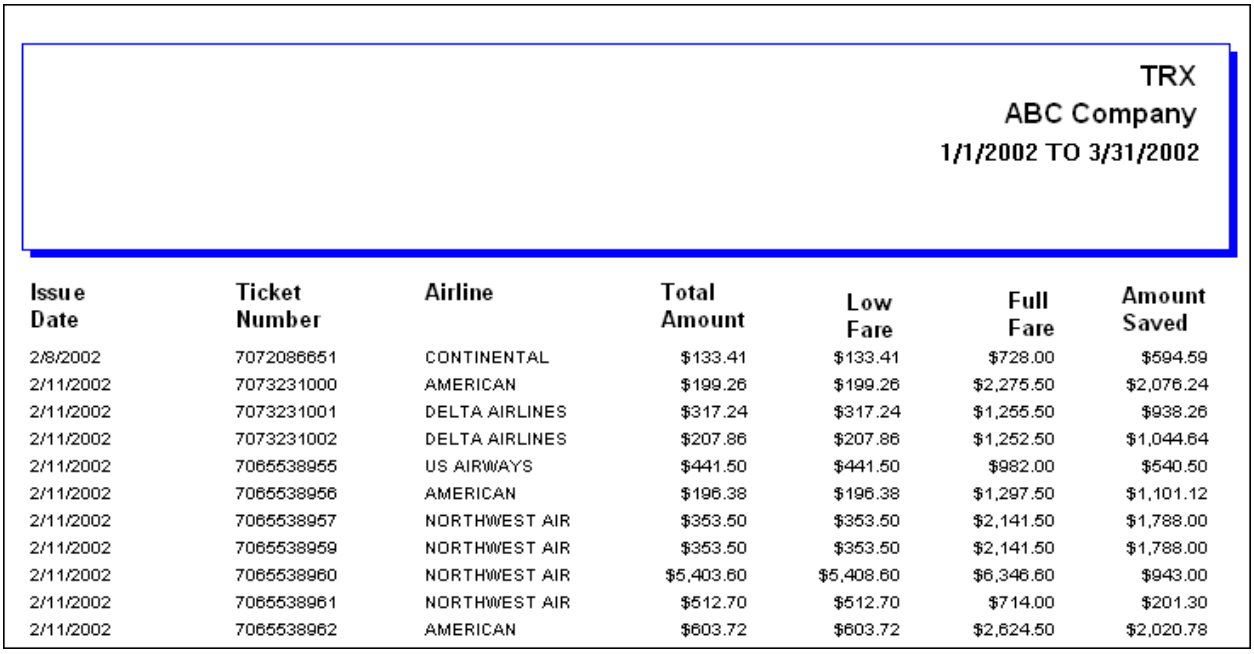
You will build 9 reports in all:

- Detailed Report
- Summary Report
- Ranking Report
- Summary Ranking Report
- One to many Linked Report
- One to one Linked Report
- Unioning Report
- Crosstab Designed Report
- Excel Designed Report

Report 1 – Detail Report

The first report you will build will be a DETAIL report. It will display selected transaction information at the invoice level. In addition, you will learn to remove voided invoices as well as cruises and tours. After you have completed these steps, you will learn how to display your results in a custom design.

A Detail Report will return one row in your report for every row it finds in the Database.



TRX
ABC Company
1/1/2002 TO 3/31/2002

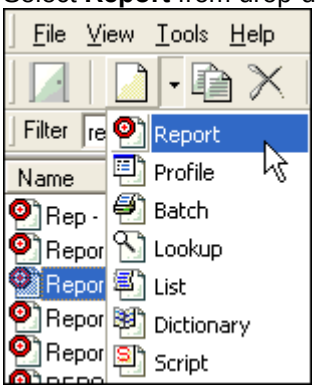
Issue Date	Ticket Number	Airline	Total Amount	Low Fare	Full Fare	Amount Saved
2/8/2002	7072086651	CONTINENTAL	$133.41	$133.41	$728.00	$594.59
2/11/2002	7073231000	AMERICAN	$199.26	$199.26	$2,275.50	$2,076.24
2/11/2002	7073231001	DELTA AIRLINES	$317.24	$317.24	$1,255.50	$938.26
2/11/2002	7073231002	DELTA AIRLINES	$207.86	$207.86	$1,252.50	$1,044.64
2/11/2002	7065538955	US AIRWAYS	$441.50	$441.50	$982.00	$540.50
2/11/2002	7065538956	AMERICAN	$196.38	$196.38	$1,297.50	$1,101.12
2/11/2002	7065538957	NORTHWEST AIR	$353.50	$353.50	$2,141.50	$1,788.00
2/11/2002	7065538959	NORTHWEST AIR	$353.50	$353.50	$2,141.50	$1,788.00
2/11/2002	7065538960	NORTHWEST AIR	$5,403.60	$5,408.60	$6,346.60	$943.00
2/11/2002	7065538961	NORTHWEST AIR	$512.70	$512.70	$714.00	$201.30
2/11/2002	7065538962	AMERICAN	$603.72	$603.72	$2,624.50	$2,020.78

Report 1 continued

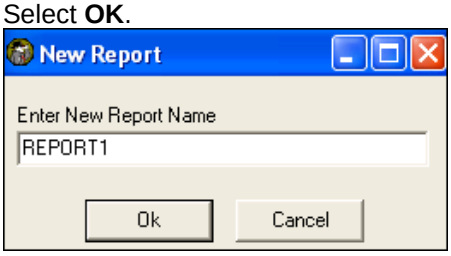
Create Report

Here are the steps to create a new report:

1. Select the **New** icon.
2. Select **Report** from drop-down menu. The **New Report** pop-up window appears.



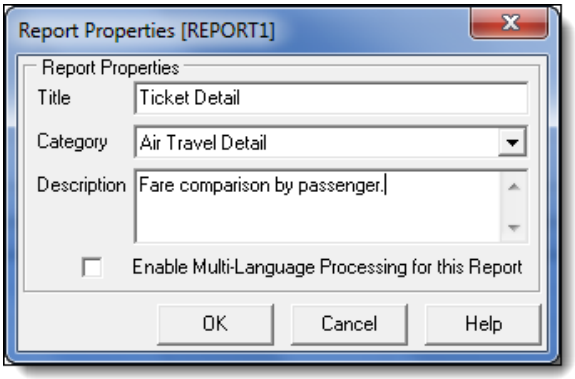
3. Enter a name for the new report: **REPORT1**
4. Select **OK**.



Report Properties

Report properties will set up what the customer will see if the report is going to be used on the TRAVELTRAX Web Reporting site. When creating your own reports, enter the appropriate title, category and description based on each report.

5. Click on **Report** then **Properties**.
6. Title –**Ticket Detail**
7. Category – **Air Travel Details**
8. Description - **Fare comparison by passenger**
9. Select **OK**.



Report 1 continued

Section Properties

Section Properties will set up the date properties, links, unions, etc for each section of a report. Since a report can have more than one section when needed, these properties could possibly be different for the different sections.

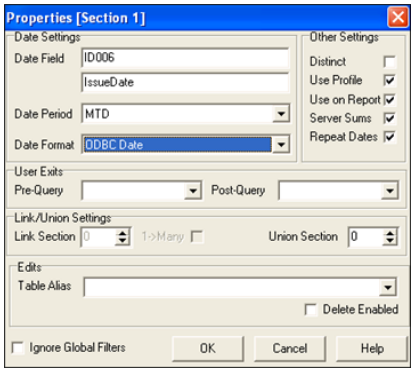
10. From the menu bar, select **Section** then **Properties** (or right click on the Section 1 tab and choose **Properties** from the pop-up menu).

11. **Date Field** – In the floating data dictionary, scroll down and find the **Issue Date** field (ID006). Drag and Drop it into the Date Field.

12. **Date Period** – Using the drop-down arrow, select **MTD** from the list.

13. **Date Format** – Select **ODBC** from the drop-down-list.

14. Select **OK**.



15. Description – **Ticket Detail Data**

Report 1 continued

Query

Now you will be selecting the data elements you want to see in your report. You will drag and drop fields from the Data Dictionary to the Fields area of your query window.

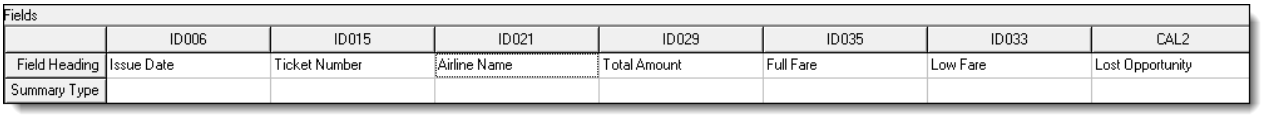
Query Fields

16. Place the following fields in your first seven Query Fields:

- **ID006** IssueDate
- **ID015** DocumentNumber
- **ID021** Vendor Name
- **ID029** TotalAmt
- **ID035** Full Fare (this may be called something else on your screen)
- **ID033** Fare Compare2 (this may be called something else on your screen)
- **CAL2** CALCNUM

17. Change the names of the following Field Headings:

- Change ID015 to **Ticket Number**
- Change ID021 to **Airline Name**
- Change ID035 to **Full Fare**
- Change ID033 to **Low Fare**
- Change CalcNum to **Lost Opportunity**.



NOTES

- If you drag a field from the dictionary and place it on top of an existing field in your query, it will push that field to the right and take its position.
- If you want to remove an existing field, right click on it and select **Delete Field**.
- If you want to change the order of fields, click on the field number and drag the column to the right or left.

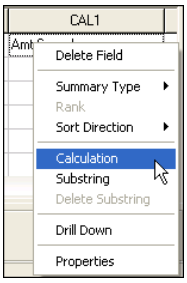
Report 1 continued

Calculations

This is where a value is assigned to a calculated field. A value is normally some form of a mathematical function. In this exercise (Report1), we want to calculate the Amount Saved. This is accomplished by subtracting the Total Amount (ID029) from the Full Fare (ID035).

Anytime you place a CAL field in your query it means that you are creating a calculation instead of just pulling up the data. You must complete the calculation or you will get an error when you run the report.

18. Right click anywhere in the **CAL2** column and select **Calculation** from the pop-up menu.



Expression Builder

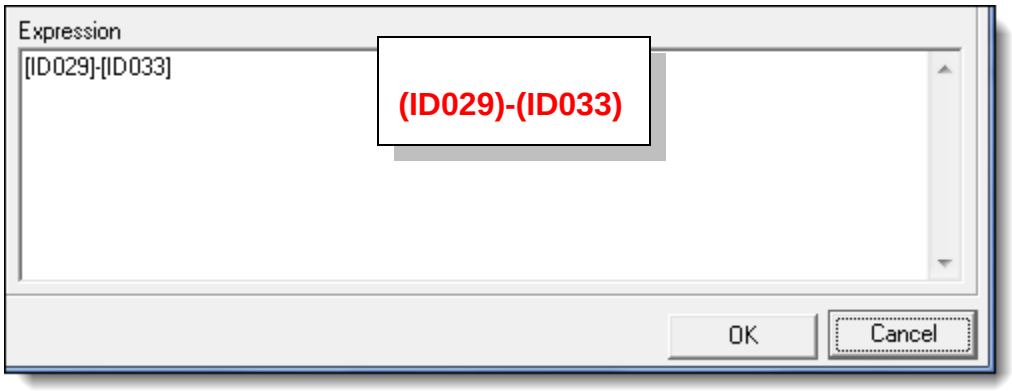
When you get the expression builder box, you have to enter a SQL statement. Expression Builder is used when creating calculations or filters.

19. Locate TotalAmt **(ID029)** in the Data Dictionary and drag it to the Expression Builder window.

20. Add a minus sign after ID029 with the keyboard or the on-screen keypad.

21. Locate **Low Fare** (**ID033)** in the Data Dictionary and drag it to the Expression Builder window and drop it after the minus sign.

22. Select **OK** to save your work.



Report 1 continued

Filters

The next step is to filter the data you want displayed on your report. In a standard ticket report, you'll want to remove voids and you need to select vendor types that will return airline and rail tickets only. You do this with filters.

Exclude Voids

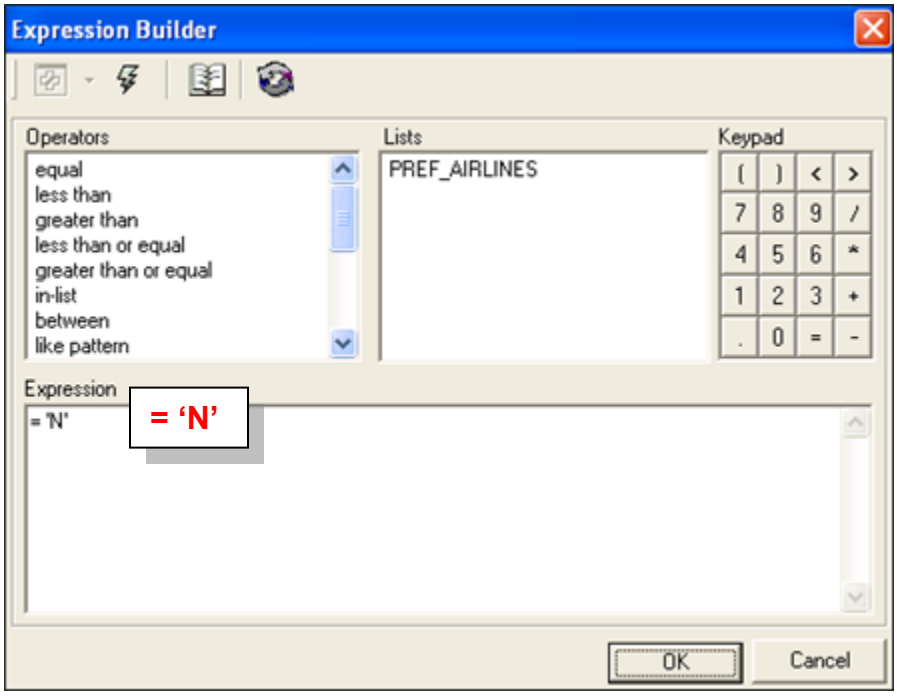
23. Locate the void indicator **(VoidInd - ID007)** and drag it to the first column in Filters.

24. Right-click on the field you pasted and select **Edit Filter** to bring up the Expression Builder.

25. Drag the operator **equal** to the Expression area.

26. Type **'N'** (a single quote (an apostrophe), an uppercase N, and another single quote).

27. Select **OK** to finish.



Report 1 continued

Airline Vendor Only

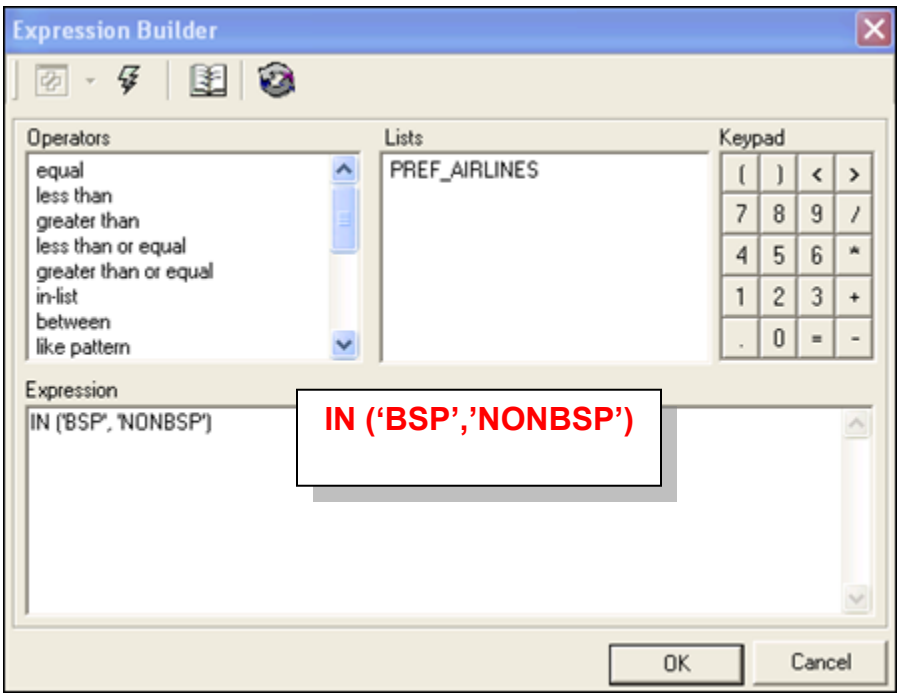
28. Locate the Vendor Type **(VendorType** - **ID018)** and drag it to the second column of Filters.

29. Right-click on the field you pasted and select **Edit Filter** to bring up the Expression Builder.

30. Drag the operator **in list** to the Expression area (or you could just type IN).

31. Click between the parentheses and type: **('BSP', 'NONBSP')**

32. Select **OK** to finish. You have now built the query and established filters. Now, save your work.

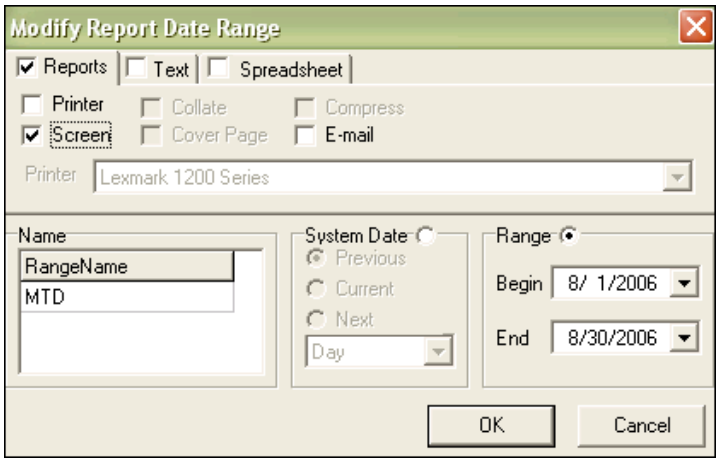


33. Select **Report** and then **Save** from the menu bar.

Report 1 continued

34. Run the report to make sure you receive data. This is a good habit to get into after you create a report. You don't want to go in and build a design that may take hours only to find that your data won't pull up.

- Click the ***run report*** icon .
- Select the output for the report and select the date range.



- Click **OK**. The report will run in Excel (Excel is the default when you have not created a design for your report).

If your report shows data, then you can start the design for your report.

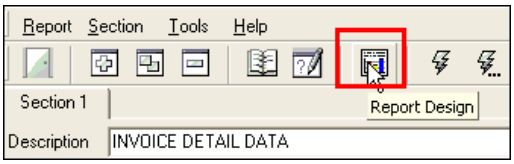
Report 1 continued

Paradox Design Overview

This is where you will design the look of the report. There are two ways to access the report design.

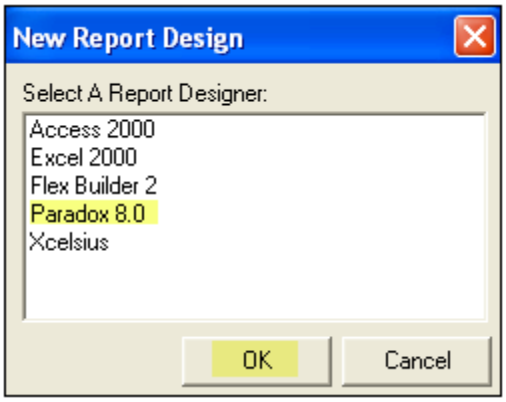
- Right-click on the name of the report from the Main Menu of TRAVELTRAX.
- If you have the query pulled up, follow the steps below:

1. Click on the **Report Design** icon. This means that you are in the EDIT DESIGN mode.



2. Select **Paradox x.0**.

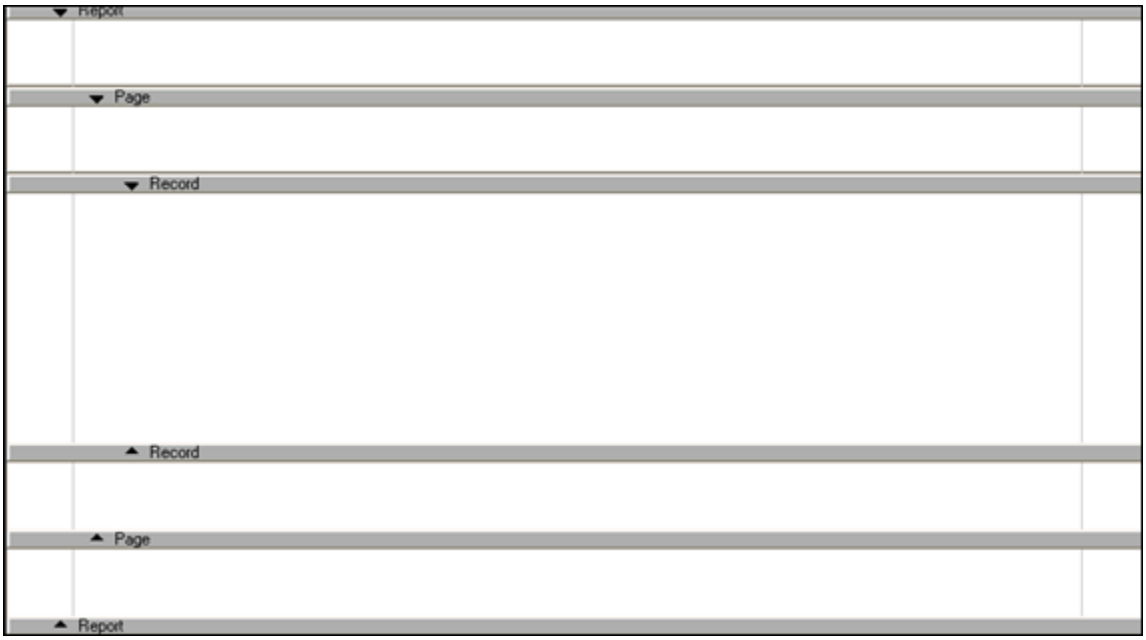
3. Select **OK**.



Bands

Bands are Horizontal Bars which appear in the Report Design. There are three default bands:

- **Report Band** – Objects placed here print once at the beginning or ending of a report (header and footer).
- **Page Band** – Objects placed here print once per page (header and footer for each page).
- **Record Band** – This is the body of the report where all the data appears
- You can also add a band to the report. This is accomplished through a button called **Add Group Band**. These bands allow you to break your data into groups.



Paradox Overview continued

Before we begin to create the design for Report 1, we need to cover some basics. The designer is where you layout the report. You choose fields from the query and put them in the design using a multitude of tools.

These tools are very important for you to learn. If you forget the name of a specific tool, hover your mouse across the button bar (tool icons), and the name of the tool will appear as a hint.

Let's now define each of the tools you'll be using in your report design.

Run Report Button
Use this button to see the report on the screen. After the initial designing of the report, it's a good idea to generate the report to the screen to see what the design looks like with data in the tables.

Design Button
After viewing the report on the screen, it is possible to change the design if an object needs to be redefined in some way (such as changing the color, size, alignment, etc.).

Use the View Data and Design buttons in conjunction with each other. Generate the report to the screen, select the Design button to modify an object, and then select the View Data button to see how the change affected the report.

Selection Arrow
Use the Selection Arrow to select objects in order to manipulate them.
After the object is selected, you can size it, move it, and edit it.

Box Tool
Use the box tool to make boxes of any size, shape, color, etc. on the report.

Line Tool
Use the line tool to draw vertical, horizontal, and diagonal lines of different lengths and widths on the report.

Ellipse Tool
Use the Ellipse tool to make circles and ellipses of differing types and sizes.

Text Tool
Use the Text Tool to create hard-coded words on the report.

Graphic Tool
Use the Graphic Tool to add graphics such as your company logo to the report. You can paste them from the clipboard or bring them in using a graphic file.

Paradox Overview continued

OLE Tool
Use the OLE Tool to add a linked object to the report design.

You can bring in charts and graphs from other software programs.

As the linked object gets updated in the other programs, it will also change in your design.

Field Tool
Use the Field Tool to put fields from the Query in the report design. Each Query field is laid out individually using this object.

Table Frame Tool
Use the Table Frame Tool to add all of the fields from a section to your report design.

This object allows you to select every field at once (if you wish). When the report is printed, it will appear in a Tabular Format.

Multi-Record Tool
Use the Multi-Record Tool to layout repeating values in the report design. The layout is set for one record and then you specify how many times you want the record to repeat down and/or across the page.

Mailing labels are generally laid out using this format.

It is also used quite a bit to put segment data on the design because, if a ticket has more than one segment, you generally want it to repeat down the page.

The Table tool also repeats data down the page. It is not as flexible as the Multi-Record Took because it only repeats down, not across.

Chart Tool
Use this tool to show data as a chart or graph in the report design.

Crosstab Tool
Use the Crosstab Tool to show your data in a spreadsheet like format.

Add Group Band Tool
Use this tool to break your data into groups.

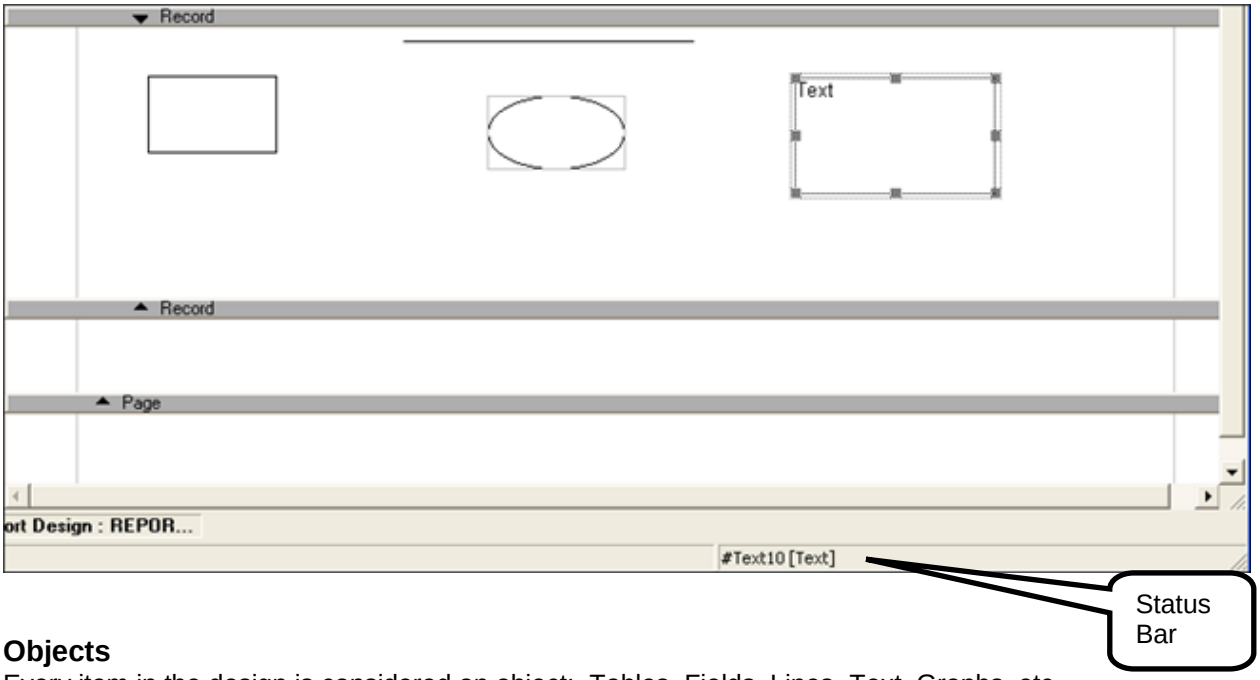
Data Model
Use the Data Model to show what tables are included in the design and to show a diagram of the relationships between those tables.

Paradox Overview continued

Using Tools

- Click on the tool you want to use.
- Drag the mouse into the report and create the design you need from that tool.

Practice
Use the appropriate tools to create a box, a circle, text, and two fields.



Objects

Every item in the design is considered an object: Tables, Fields, Lines, Text, Graphs, etc.

- Select an object by clicking on the **Selection Arrow** icon on the toolbar.
- Click on the object in the report. The selected object(s) will have little black boxes called Handles around them.
- To perform the same task to many objects at one time (i.e. change font sizes, align fields, change field sizes, etc.), you can select multiple objects at one time. There are many ways to select multiple objects.
    - Select the first object, hold down the Shift Key and click on the other object(s) you want to select.
    - Select the Band which holds the objects to be selected. Then, select the Edit option on the Text Bar, then select Select-All. All objects in the highlighted band will be selected. Rest your mouse to the left of all objects to be chosen, hold down the left mouse button, hold down the Shift Key, and draw a box around the chosen objects.
- Every object in the design has a name. You can determine whether you have the right object selected by looking at the bottom right corner of the screen that shows the Status Bar (see callout box under screenshot above) after you select it. The name also appears when you inspect an object. The name becomes important when formulas are defined in the design.

Paradox Overview continued

Containership

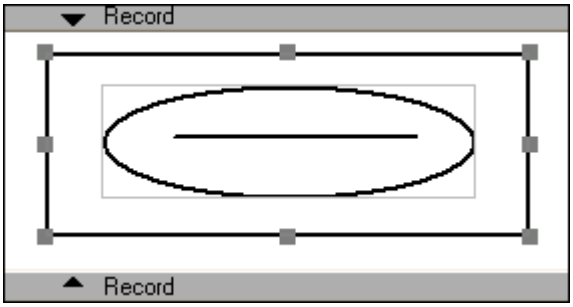
Containership has to do with the way objects interact with one another. As we stated before, every item on a report is an object. You can have objects within objects (this is where Containership comes into being). If you have one object within another object, the surrounding object by default contains the inner object.

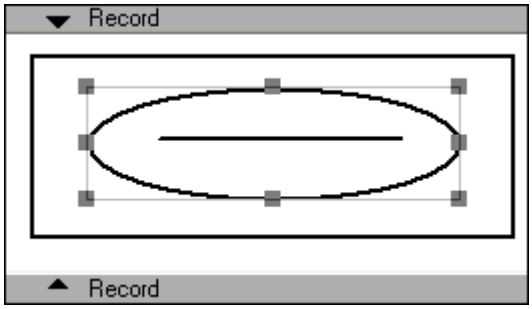
- If one object is contained within another, you must click multiple times in order to get to the inner object. For example, you could have a Box, an Ellipse, and a line on the report. If the Line is within the Ellipse, which is within the Box, the Box could contain both the Ellipse and the Line, while the Ellipse could contain the Line. In order to select the Line, you need to point at the line and click three times.
- While Containership is turned on, when the Box moves, the Ellipse and Line also move.
- You can turn Containership off. You do this by Inspecting (right-clicking) on the Box, selecting Properties, Design, and Left-Clicking on Contain Objects. The option is selected if there is a Checkmark out beside in it.
- If we turn Containership off the Box, but leave it on the Ellipse, we can move the Box without moving the Ellipse and the Line, but we can't move the Ellipse without moving the Line.
- As another example, a table is an object in the design. Within the table, you have the Record (which is a row) and within the Record, you have a Field. In order to get to the Field, you need to point the mouse at it and then click once to select the table, again to select the record, and again to select the field.
- You must be aware of which object is selected when laying out the report design.

Paradox Overview continued

Containership Practice

1. Draw a large Box in the record band.
2. Draw an Ellipse inside the Box - By default, the Box will contain the Ellipse.
3. Draw a Line inside the Ellipse - By default, the line will have the handles.
4. Press [Esc]. - The Ellipse is selected.
5. Press [Esc] again. - The Box is selected.
6. Pressing [Esc] - Moves you back one level.
7. With handles around the Box, move the Box with the arrows of the Keyboard. The Ellipse and the Line move with it (containership).





8. Select the Ellipse - You know you have selected it by seeing handles on it and by seeing Ellipse in the status bar.
9. Move the Ellipse with the keyboard arrows the Ellipse and Line move but not the Box.
10. Select the Box.
11. Right-click the mouse to inspect the box.
12. Select Properties, Design from the menu.
13. Click on Contain Objects to remove the check mark. (No ☐ = Turned Off)
14. Move the Box. Notice that the Ellipse and Line do not move.

Paradox Overview continued

Data Model

The Data Model contains the query information, the date information, and some profile information. It will always have at least 3 tables listed on the right hand side of the screen:

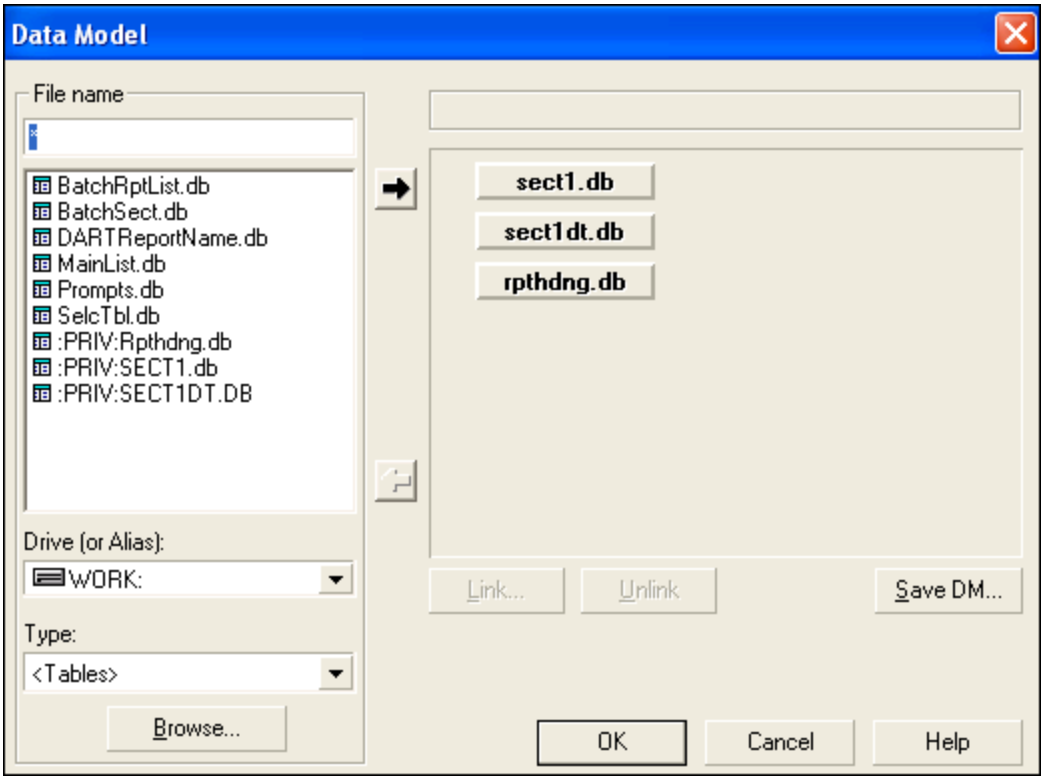
- **Sec1.db** -You have to have at least one section for each report. If you right-click this button, a list of all the fields from this section will display. These are the data fields that can be entered into the design.

  If your report contains more than one section, you will have one button for each section in the data model. For example, if you have 3 sections in your report, you will see **Sect1.db, Sect2.db**, and **Sect3.db**.

- **Sect1dt.db** -This is added to the design when you add a Reporting Period in the section properties. The fields are the Beg Date, End Date, and the Date Range. This table enables you to reference date ranges in your design.

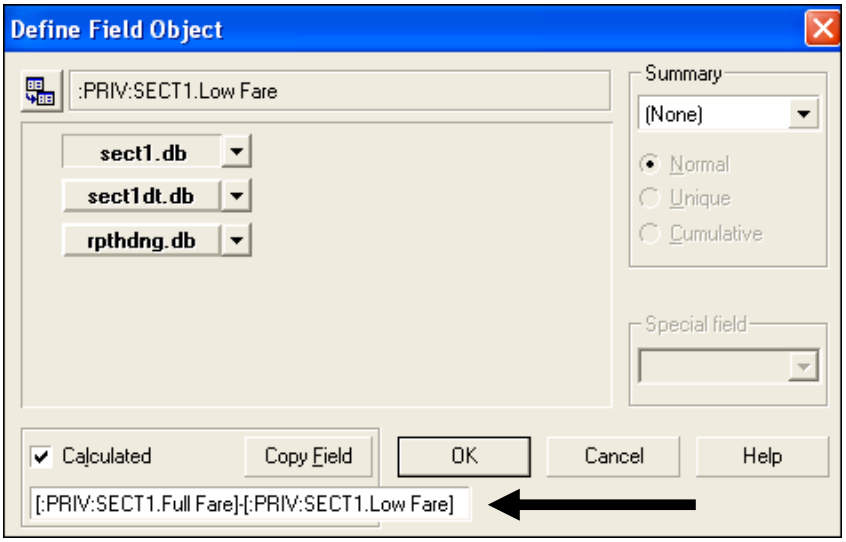
  If you have 3 sections to a report, with reporting periods in all three section properties, you will have **Sect1dt.db, Sect2dt.db**, and **Sect3dt.db** in the Data Model.

- **Rpthdng.db** – This is automatically added to the Data Model. It will allow you to reference information from a profile (if the user runs the report against a profile) add prompt information to the design, and add the title and/or name of the report to your design. This data is usually entered into a page header or onto a cover sheet.



Paradox Overview continued

Formulas
A formula is a calculation that is defined in the design.

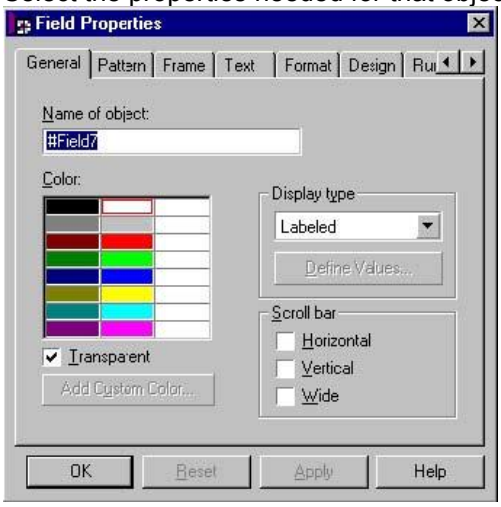


Properties

Properties are selections which can be defined for all objects in the design. Some properties are the font size, color, font style, word wrap, format, etc... Properties affect the way the data looks when the report is printed.

Activate Property Menu

- Right-click on an object (or objects – if you want to do the same thing to multiple objects). Using the right mouse button means to Inspect an object.
- Select **Properties**.
- Select the properties needed for that object to make it look the way you'd like it to look.



Report 1 Design

If you need the complete steps to create a design, please see the Desktop Reporting User Guide on the Portal. The steps below are specifically for this report example.

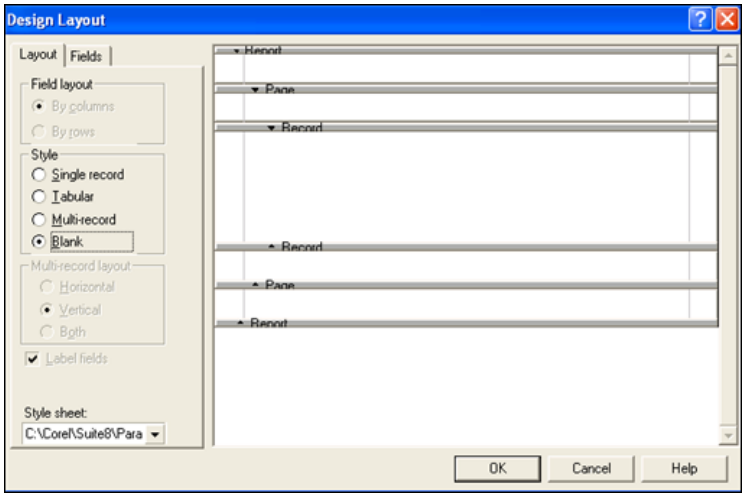
1. **Data Model** – Check the data model to see how many data fields are in this report (***Format – Data Model***).

2. **Set Page Setup** – This is where you select the orientation and size of the page as well as the margins. Use the steps below for this report:
   a. Select ***File – Page Setup*** from the Menu Bar.
   b. Choose **Portrait**.
   c. Select **OK**.

3. **Select a Layout** – Paradox has some layouts that may work for your report.
   a. Select **Format – Layout** from the Menu Bar. Under style you have four choices:
      - **Single Record** - The query fields are set up using individual fields. This option is the same as choosing the Field tool from the Button Bar.
      - **Tabular** - The query fields are set up in a table. This option is the same as choosing the Table Frame tool from the Button Bar.
      - **Multi-Record** - The query fields are laid out in a Multi-Record. This option is the same as choosing the Multi-Record tool from the Button Bar.
      - **Blank** - The design is blank. No data will appear when you print the report.
   b. In the style area, select **Blank**. The right side of the displayed screen will show an example of the layout style you choose.

4. Select **OK**.

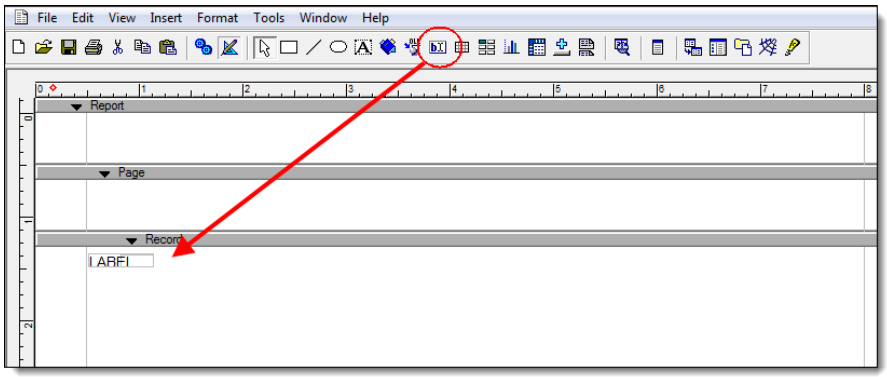
5. A warning will appear saying it will change the entire design. Select **OK**.



Report 1 continued

6. **Change View** – This allows you to see the design better, it doesn't change the size of the design.
   a. Select **View** (from Menu Bar).
   b. Select **Zoom**.
   c. Select **Fit Width**.

7. **Create Fields**
   a. Go into the Data Model (**Format – Data Model – right click on Sect1.db button**) to find out how many data fields you need for this report.



   b. Select the **Field** tool.

   c. Click in the upper left corner of the Record Band and drag a box to create one field. Make sure it is up against the left margin.

8. **Un-label the Field –** The default for this field has it set up to show the name of the field along with the data. We only need to see the data, so we have to un-lable the field.

   a. Right-Click on the field and select **Properties**.

   b. Under the Display type, choose **Edit** and then select the **Apply** button. This will now allow you to edit this field. (Notice that the property choices are different after you choose Edit/Apply).

   c. Set all other properties you want for the fields you are going to enter (font, color, etc.). You should also set the following properties to ensure that all the information in each field will be properly formatted and display in the report:
      - Select the ***Text*** Tab and uncheck **Word wrap**.
      - Select the ***Design*** Tab and uncheck **Size to fit**.
      - Select the ***Run*** Tab and unselect the **Fit Height** option.

   d. Select **OK**.

Report 1 continued

9. Copy and Paste to create other similar fields.
We could have drawn seven fields with the field too, unlabeled and set the properties for each field separately, but to save time and to make your work easier, use the copy feature.

a. Select the field you just created (look for handles).
b. Copy/Duplicate the field 6 times (so you have 7 fields total) by doing one of the following:
   - Select **Edit – Copy** or
   - **Right-click** and **Copy** or
   - **Ctrl C** or
   - Click on the ***Duplicate objects*** button from the alignment toolbar.

10. Move fields into a row
- Move one field to the right margin.
- Move the other fields so they are in one row. They do not need to be in a straight line yet.

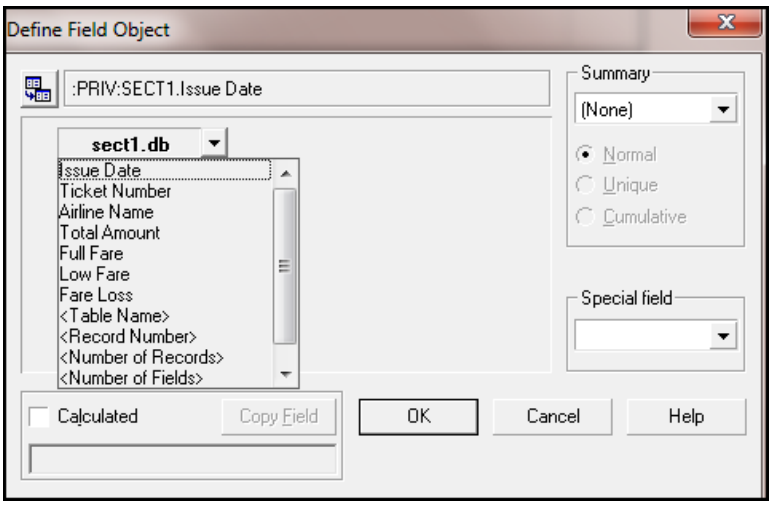
11. Define each field

a. Right-click on the first field and select **Define Field**.

b. Click the drop-down arrow next to **sect1.db**.

c. Select the information from the report needed in each field.

d. Repeat these steps for each field.



Results:

Report 1 continued

12. Align Fields - This process will: Space your fields equally across the page, align the top of all fields in a straight line, and make all fields the same thickness.

a. Select all fields by one of the following methods:

Edit Select All
- Highlight the Record Band by clicking on the band itself or clicking anywhere in the white space in the record band.
- Select **Edit** from the menu bar.
- Select **Select All**.

Ctrl Key
- Hold the Ctrl Key down.
- Select each field.

Shift – Box
- Hold the Shift Key down.
- Go up and to the left of the first object.
- Click and drag a box around all objects that need to be selected.

b. Adjust Spacing: All fields will space equally across the page.
- **Format – Spacing – Horizontal**. Or
- Click on the ***Adjust Horizontal Spacing*** (1) button on the Alignment toolbar.

c. Align to Top – All fields will line up across the top.
- **Format – Alignment – Align Top**.
- Click on the ***Align Objects to Top*** button on the Alignment toolbar.

d. Adjust Size – All fields will be the same height.
- **Format – Size – Minimum Height**
- Click on the ***Adjust to Minimum Height*** button on the Alignment toolbar.

Results

Report 1 continued

13. Create Column Headers

As the report stands now, we have the data on the page but no labels to indicate what each piece of data indicates. Our data will be displayed in columns, so we need a label above each column to make our report make sense

a. Select the **Text Tool**.

b. Click near the left hand margin in the Page Band where you want your text to begin. A place holder will appear on the Ruler. This is the starting point for the first header label.

c. Deselect the Text box (click outside of it)….trust me.

d. Right-click text box and set the properties for the text box. Choose the font size 9 bold and set the properties (Run Time tab – uncheck ***Fit Height***).

e. Click the first text box and type in the longest header TICKET NUMBER. This will insure that the text box you create will fit all headers.
   - You may need to click 2 times before you get the cursor and are able to type.
   - You can make it a two line label by using clicking **Enter** on your keyboard after you type TICKET. This makes sense for some long header label names.

f. Resize the text box so there's very little white space below and to the right of the column header name
   - Click on the text box
   - Grab the bottom-middle handle and drag it until the box is right below the word DATE.
   - Grab the right side handle and drag it until the box is close to the end of the word NUMBER.

g. Copy the text box and paste 6 times, one for each field. Make sure one text box is on the left margin and one is on the right margin.

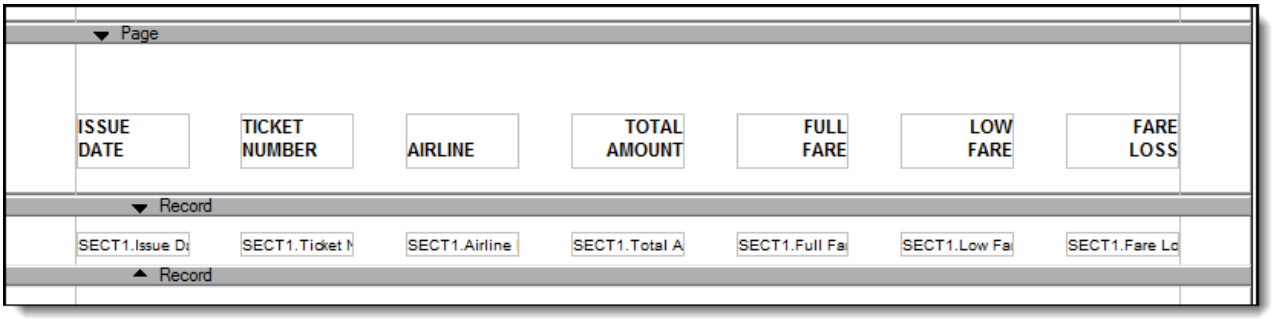
h. Change all headers to the correct header names.

Report 1 continued

i. **Align Headers** – Align headers to each other and align each header to its corresponding data field in the record band.
   - Select all text boxes and align objects to bottom.
   - Deselect all text boxes.
   - Hold your Ctrl key and select the Issue Date text box and the Issue Date field.
   - Select the ***Align Objects left*** button and then the ***Align text left*** button.
   - Repeat this for each data field/header. Keep in mind that numbers and dollar amounts are always justified Right and text is justified left. That means that the Issue Date, Ticket Number, and Airline will be aligned left and all others will be aligned right (align objects and text).

NOTES:
- When you align objects left, right, or center, all objects must be in a vertical plane.
- When you align objects top, bottom, or middle, all objects must be in a horizontal plane.
- When aligning data fields containing dollar amounts, it's best to first move the data fields to the left of what you're aligning and then Align Right. This helps get all the decimal places lined up.

Results:



Report 1 continued

14. Create the Report Header and Footer

Your company will most likely have a standard header and footer that they want to use for all reports. Instead of creating these headers and footers for every report, you should just find one of each and copy them into each report design.

NOTES:

- You should consider whether the header/footer is portrait or landscape so it matches the report.
- Then you'll find a report that contains the header and footer you need.
- Then you'll open the DESIGN of that report so you can copy and paste the header and footer.

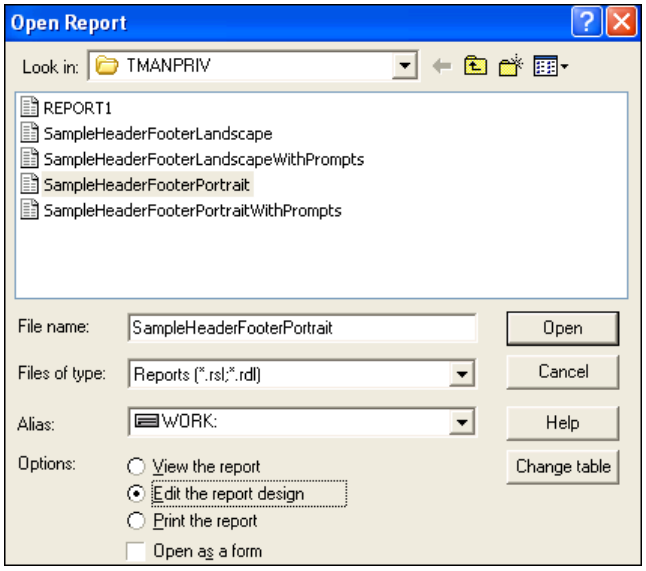
a. Create space above the column headers in the page band so the header will fit.
   - Select the Page Band by clicking on the band itself or by clicking in the white space within the band.
   - Move your mouse up until you see a double-arrow.
   - Once you see the double-arrow, click and drag up.
   - Make sure you're in the correct band or you could be creating white space in the wrong band.

b. Select **File – Open – Report**.

c. Highlight the report needed. (The instructor will advise you of the location of the report during class.)

d. Select the **edit the report design** radio button. (If you do not do this, the report will run and you will only see the report results, not the design.)

e. Select the **Open** button. You are now in the report design for the Report Header…NOT the report design for the report you are creating.



Report 1 continued

Create Report header and footer continued

a. Highlight the header of the report. To do this, click inside the Page band, but outside the actual header.

b. Select **Edit – Select All**. This will select your header **and** footer.

c. Since we only need the header, we need to deselect the footer (click Ctrl and click on the footer).

d. From the menu bar, select **Edit – Copy** (you can also right-click and **Copy**).

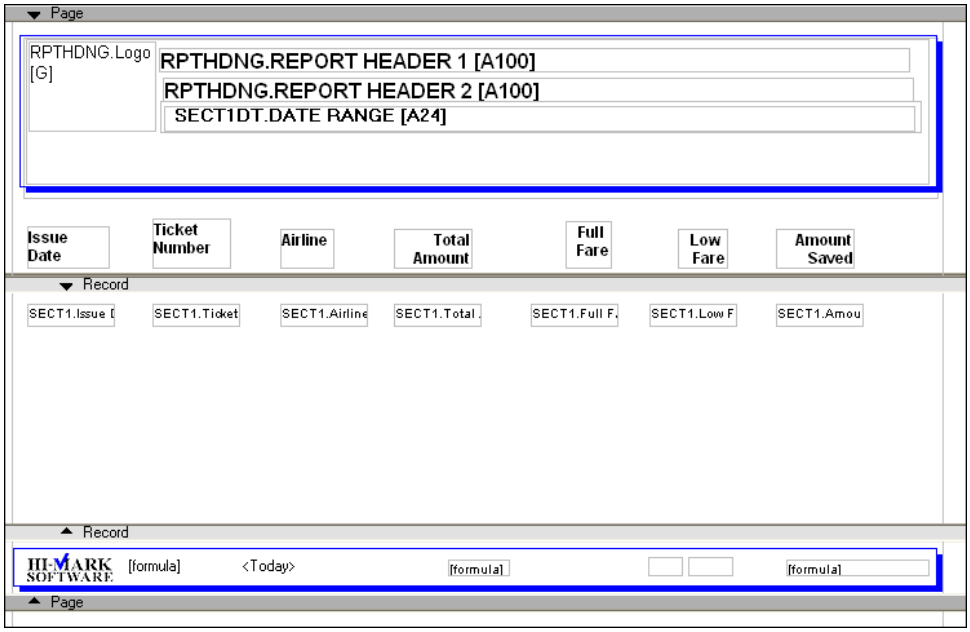
e. From the menu bar, select **Window** and click on your report. You are now back in your report design with the page band selected (not the Header design).

f. From the menu bar, select **Edit – Paste**.

g. Go back to Window on the Menu Bar and select the report design again.

h. Repeat the steps above to copy the footer into your report's lower page band.

i. When you are finished, go back to the report design and close it. There are more design steps we could do here, but it is best to generate our report first to see if we have any problems to resolve.



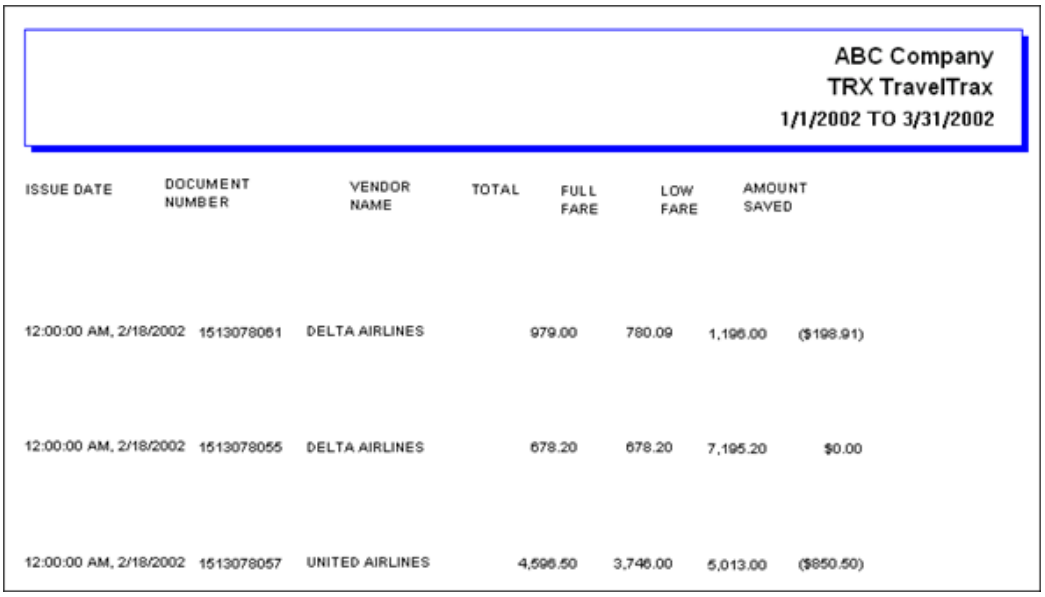
j. Select **File – Close**.

k. Select **Save** when question appears. You should be back at the DART main window in TRAVELTRAX.

l. Select the **Exit DART** icon to save your work and to return to the Main Menu.

Report 1 continued

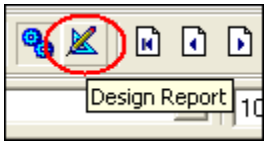
In this part of the exercise, we need to make our report more presentable. Notice the great amount of space between our data rows? This is caused by the space between the different bands in the design mode. Also, notice how that the Total Amount, Full Fare, and Low Fare don't have dollar signs? How about the format for the Issue Date? We need to fix all this.



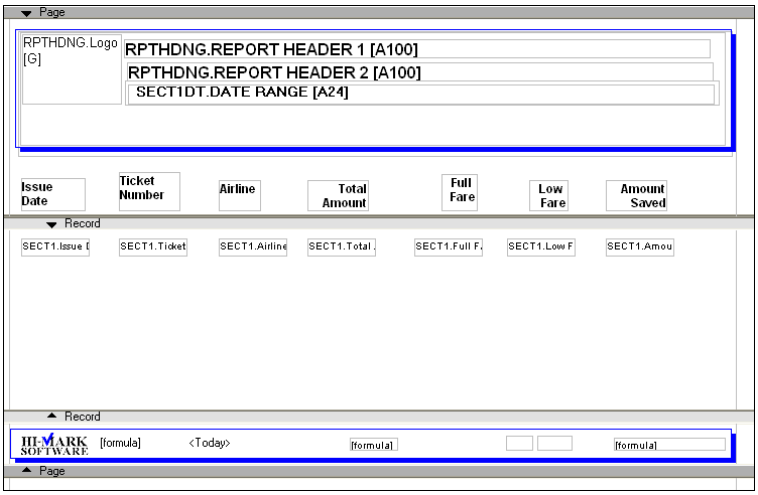
ABC Company
TRX TravelTrax
1/1/2002 TO 3/31/2002

ISSUE DATE	DOCUMENT NUMBER	VENDOR NAME	TOTAL	FULL FARE	LOW FARE	AMOUNT SAVED
12:00:00 AM, 2/18/2002	1513078061	DELTA AIRLINES	979.00	780.09	1,196.00	($198.91)
12:00:00 AM, 2/18/2002	1513078055	DELTA AIRLINES	678.20	678.20	7,195.20	$0.00
12:00:00 AM, 2/18/2002	1513078057	UNITED AIRLINES	4,596.50	3,746.00	5,013.00	($850.50)

To make changes to our design you must go back to the design mode. Remember, to do that once you've run the report, just click on the Design Report button at the top of the page.



This will bring you back to the design page of the report.



Report 1 continued

1. Remove Space

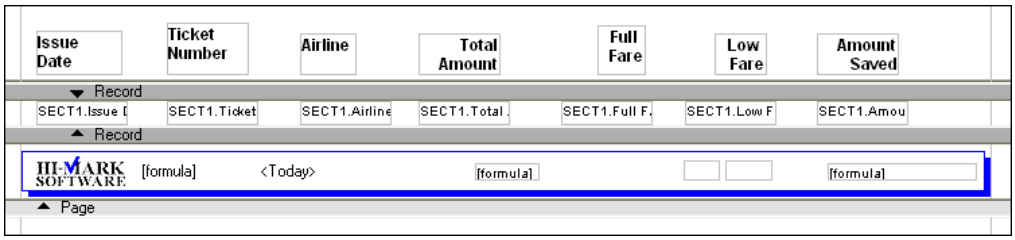
We can remove white space in a band just like we created more space within a band.

- Highlight a band. Highlight the band and either move your mouse up until you see a double-arrow or move it down until you see one.
- Once you see the double-arrow, click and drag up (or down).
- Make sure you're in the correct band or you could be creating white space in the wrong band.

a. Highlight the band. Move the mouse up or down until you see double, vertical arrows.

b. Left-Click and hold down.

c. Drag the band up or down to where you want it.
- Practice and experimentation is needed here.
- See below for an example of what your design should look like when done.

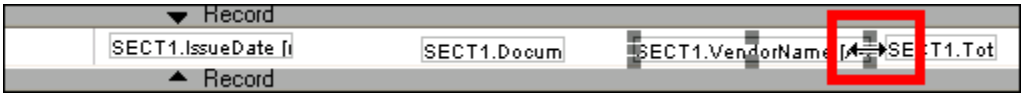


2. Fine Tuning Alignments

a. Data not centered under Header Labels.

- Select the offending object. (Amount Saved data field) by moving your mouse over the left handle field until you get horizontal arrows.

- Hold down the left mouse button and drag to the right until the box is smaller. We do this because there is no room to move left without a size change.



- Now, using keyboard arrow keys, move the object a little right of center of the AMT SAVED header label. You're going to have to estimate this; you have to allow room for the average length of the data in that field.

- Go back and view the report by clicking the Run Report Tool icon and see your result. Fine tune again if necessary.

- When satisfied, repeat the process for the other objects.

Report 1 continued

b. Header Labels too long for corresponding data.

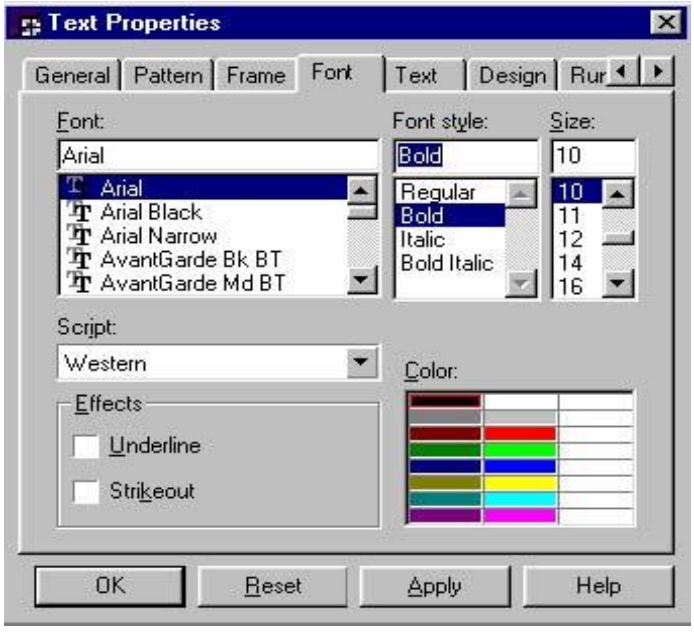
- Click on the **ISSUE DATE** object (the header name).
- Click again till you get a flashing cursor. Click after the E in ISSUE. This allows you to use your keyboard.
- Select **ENTER** on your keyboard and put DATE on a second line.

c. Repeat processes until all objects are lined up and centered.

3. Make Headers Bold

a. Select Page Band.
- Select **Edit** – **Select All** (All headers have handles).

b. Place mouse pointer over one of the selected objects.
- Right-Click.
- **Properties - Font – Bold.**



Report 1 continued

4. Add Totals to last page of report

a. Select the Field Tool.

b. In the **Report Band**, create a new field under, and aligned with, the Total column. Make space if needed.

NOTE: Putting the totals in the Report Band will display the totals on the last page of the report, not on every page of the report. If you had wanted to put the totals on every page of the report, you would put them in the Page Band.

c. Right-Click on the field and un-label it (**Properties** – Display Type – **Edit**).

d. Right-Click on that field and select **Define Field**.

e. Select Sect1.db drop-down-arrow, and select **Total Amt** from the drop-down list.

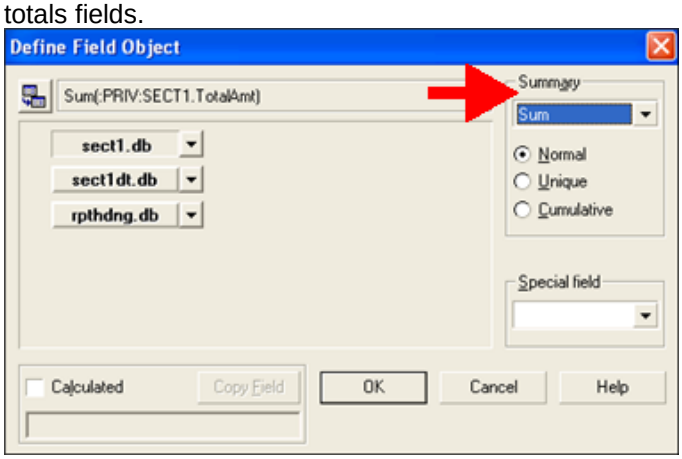
f. In the Summary area, use the drop-down arrow and select **Sum**.

g. Select **OK**. Your new field now has SUM as the prefix.

h. Copy your new field and paste it three times under your other value fields (Full Fare, Low Fare, Amt Saved). Notice the new fields also have a SUM prefix.

i. Right-Click on each of the other new fields and select **Define Field**.

j. Repeat the previous process you accomplished on the Tkt Amt total field for the remaining totals fields.



Add a label for TOTALS.

a. Select the Text Tool.
b. Click to the left of your total fields and type **TOTALS**.

Make Totals Bold

a. Highlight all totals fields using mouse and holding down shift key. You can't use Report Band because the items in the upper band would also be selected.
b. Right-Click on any selected field.
c. Select **Properties** – **Font** (font style) – **Bold**.

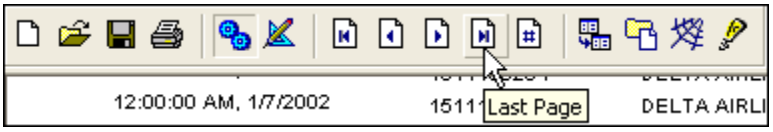
Report 1 continued

Align Fields (Totals)

- Repeating the process for aligning top and aligning left/right, align the fields in the Report Band with the fields in the Record Band.

Finish

a. View data and make final adjustments. Remember, your totals will be on the last page of the report. On the Paradox menu bar, click on the Last Page icon



RESULTS

12:00:00 AM, 1/7/2002	1510155954	DELTA AIRLINES	-369.71	-369.71	-369.71	$0.00
12:00:00 AM, 1/7/2002	1510155950	NORTHWEST AIR	-712.13	-712.13	-712.13	$0.00
12:00:00 AM, 1/7/2002	1510156072	DELTA AIRLINES	-2,342.40	-2,342.40	-2,342.40	$0.00
12:00:00 AM, 1/7/2002	1510156070	DELTA AIRLINES	-2,342.40	-2,342.40	-2,342.40	$0.00
		TOTALS	379,520.77	271,479.09	636,928.60	-109,015.18

5. Change the format for the Issue Date

For any date field, Paradox uses the Windows date as the default date. This includes the time and the date. In this report in the Issue Date column, we do not need the time of issue, so we need to change the format for this field.

a. Right-click on the Issue Date field in the Record band.
b. Select Properties
c. Click on the Format tab. We need to create a new format.
d. Click the Create New Format button.
e. Click the Create button
f. Name this Date format (whatever you & your company want it to be).
g. Click the Permanent check box – do this if you want all other TTX Desktop Reporting users to be able to use this new format. If not, the format will only be available in this report.
h. Time Format: In this section, uncheck Hour, Minute, and Seconds.
i. Time System: Change to 24 hours.
j. Order: Take out everything but the %D.
k. Date Format: Select the day, month, and year format you like.
l. Click **OK**.
m. Select the name of the new format you just created (or the format will still be Win Timestamp).
n. Click on the Run Report button to verify that the format is correct.

6. Save the Report Design and Close.

Profiles

Unless you assign a report to a profile, it will not display on a Web Reporting site. There are two ways to assign a report to a profile:

1. Open a profile – You can open a profile and assign all the necessary reports to that profile. Use this option when you've created a new profile & need to assign several reports to it.
2. Right-click & Assign To – You can right-click on a report & Assign To the correct profile(s). Use this option when you've created a new report & you need to assign it to several profiles.

Assign Report1 to all your profiles.

1. Click the View profile button.

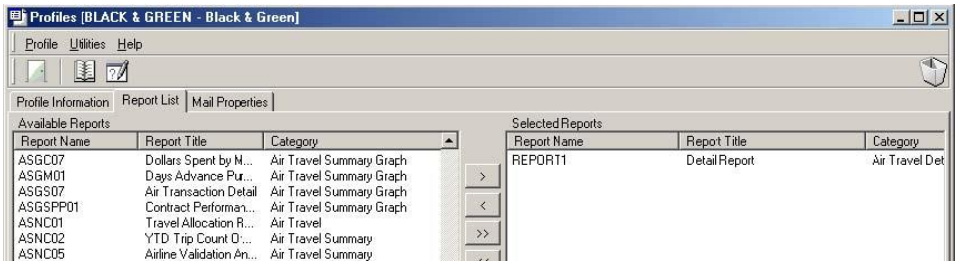
2. Find the **Corporate Client** Profile and open it.

3. Click on the Report List tab

4. Select **REPORT1** from the available reports window and move it to the Selected Reports window to complete the report assignment process.

5. From the Main Menu, right-click on Report1 and select Assign To.

6. Assign this report to the **Agencies** profile.


Profiles [BLACK & GREEN - Black & Green]
Profile Utilities Help
Profile Information
Report List
Mail Properties
Available Reports
Report Name
Report Title
Category
ASGC07 Dollars Spent by M... Air Travel Summary Graph
ASGM01 Days Advance Pur... Air Travel Summary Graph
ASGS07 Air Transaction Detail Air Travel Summary Graph
ASGSPP01 Contract Performan... Air Travel Summary Graph
ASNC01 Travel Allocation R... Air Travel
ASNC02 YTD Trip Count O:... Air Travel Summary
ASNC05 Airline Validation An... Air Travel Summary
Selected Reports
Report Name
Repot Title
Category
REPORT1 Detail Report Air Travel Det

Report 2 – Summary Report

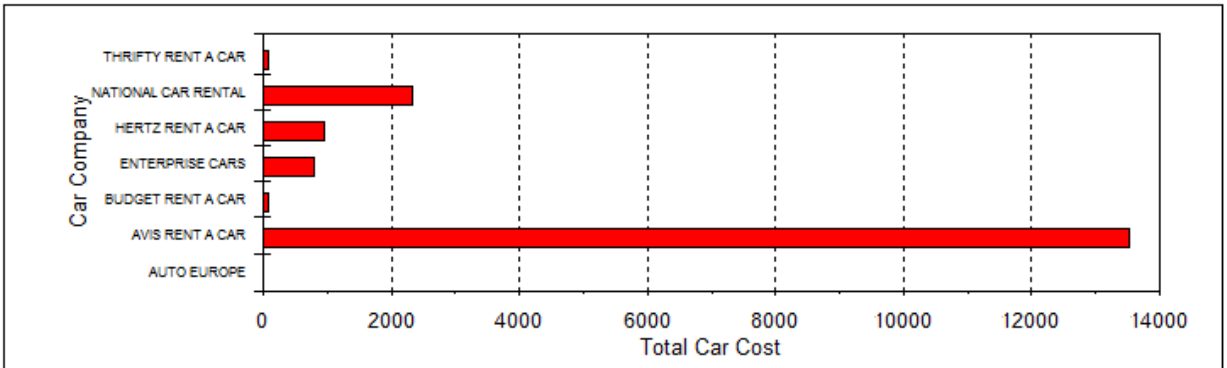
Report two is a summary report. A summary report will summarize data instead of returning each row of data. This report will display car data summarized by car chain name. Filtering the data to remove voided car invoices will be required as well as building an appropriate design.

Summary Report

ABC CORPORATION **TRX**

1/1/2005 TO 1/31/2005 Wednesday, January 09, 2013

Car Company	Car Days	Total Car Cost	Avg Daily Rate
AUTO EUROPE	2		0.00
AVIS RENT A CAR	363	13,532.27	37.28
BUDGET RENT A CAR	3	79.40	26.47
ENTERPRISE CARS	24	787.91	32.83
HERTZ RENT A CAR	22	947.98	43.09
NATIONAL CAR RENTAL	27	2,320.84	85.96
THRIFTY RENT A CAR	3	89.97	29.99
TOTALS	444	17,758.38	40.00



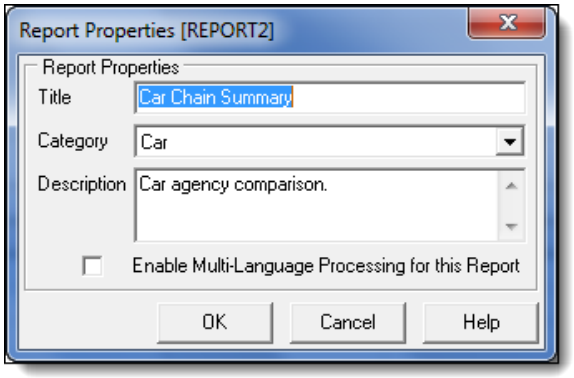
Report 2 continued

Create Report

1. Select the **New** icon and select **Report** from drop down menu.
2. Enter name for new report: **REPORT2**.

Report Properties

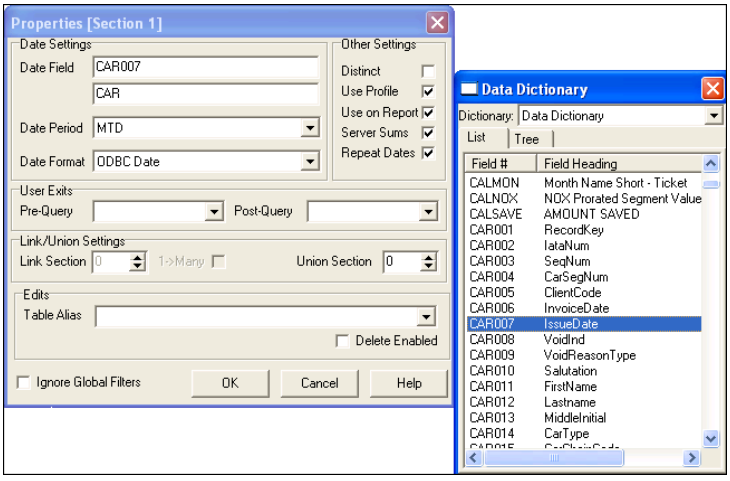
1. Click **Report** on the Menu bar and select **Properties**.
2. Type **Car Chain Summary** in the Report Properties Title window.
3. Select **OK** when finished.



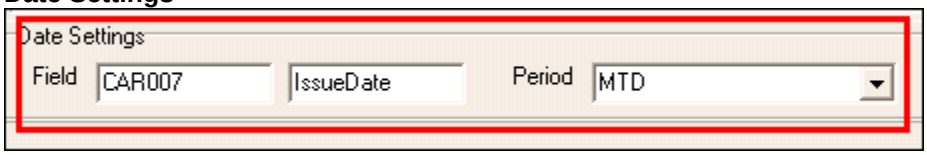
Section Properties

You can either click on Section, and then Properties on the menu bar or you can add the information in the Date Settings section (see screenshot below). The instructions below follow the Sections from the menu bar.

4. Click on **Sections** on the menu bar, then **Properties**.
5. **Date Field –** In the Data Dictionary, find the car issue date (CAR007) and drag it to the Date Field space in the Properties window and drop it there.
6. **Date Period** – Using the drop-down-arrow, select **MTD**.
7. **Date Format** – Select ODBC from the drop-down-list.
8. Select **OK**.



Date Settings



Report 2 continued

Query

1. In the Description text box type **Car Data**.
2. Click on the **Data Dictionary** icon .

Query Fields

3. Drag the following fields you want displayed in your report from the Data Dictionary into the FIELDS position of your DART Query window:
   - **CAR016** – ChainName
   - **CAL2** – Calc Number
   - **CAL2** – Calc Number
   - **CAL2** – Calc Number
4. Click in the field heading of each column and rename the fields as follows:
   - CAR016 – **Car Company**
   - CAL2 – **Car Days**
   - CAL2 – **Total Car Cost**
   - CAL2 – **Avg Daily Rate**

	CAR016	CAL2	CAL2	CAL2
Field Heading	Car Company	Car Days	Total Car Cost	Avg Daily Rate
Summary Type		Sum	Sum	Weighted
Rank Name				

Summary Types

In all queries that return summarized data, any field that returns a number must have a Summary Type assigned.

5. Right click anywhere in the Car Days column and select **Summary Type**.
6. Select **Sum** from the pop-up menu.
7. Repeat for **Total Car Cost.**
8. For Avg Daily Rate, select summary type **Weighted**.
   - A weighted average is when all units are valued according to the percentage of the total they represent, not the total number of units.
   - Example: Four people get on a scale. To calculate the weighted average, each person is responsible for their own weight, not the total weight divided by four.

Report 2 continued

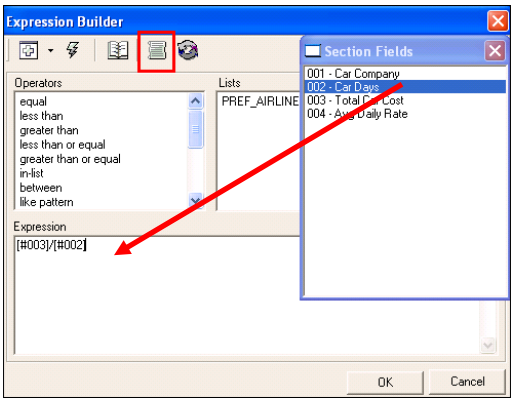
Calculation

Since you now have three undefined Calc Fields in your query, you'll need to complete the calculations to make them valid.

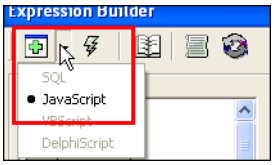
9. Right click in the column and select Calculation then add the following calculations:

10. Car Days: **CAR023 * CAR024**

11. Total car cost: **CAR023 * CAR024 * CAR027**



- Avg Daily Rate: The average daily rate will use the results from the Car Days and Total Car Cost calculations, so we have to create a different type of calculation.
- Select the **Section Field Names** button .
- Choose **003 – Total Car Cost** and drag it into the Expression window.
- Add a divide symbol **/**.
- Then choose **002 – Car Days**. This expression divides the value of query field 3 by the value of query field 2. It will look like this: **[#003]/[#002]**
- Select the **Calculation Type** drop-down arrow and choose **JavaScript**.
- Select **OK** to close the Expression Builder.

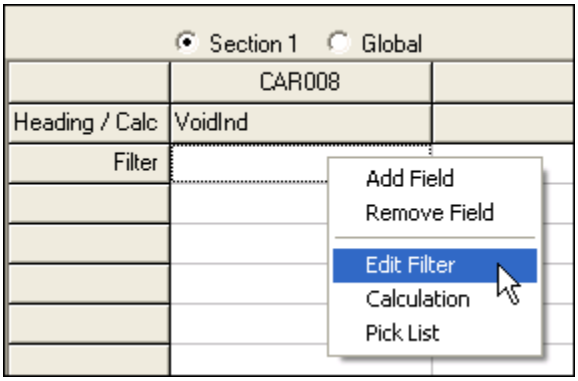


Filters

The next step is to filter out (exclude) voided car invoices.

12. Locate CAR008 (VoidInd) and drag it to the first column in Filters.

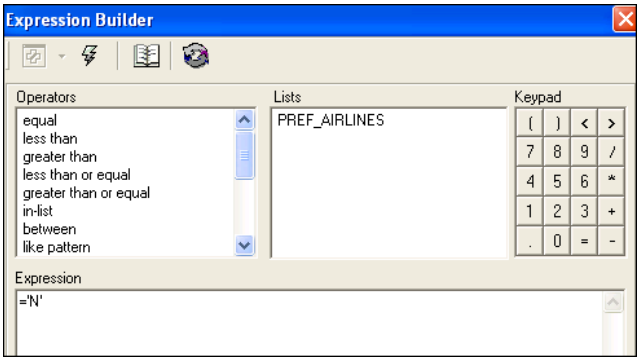
13. Right-click on the field you dropped it in and select **Edit Filter** to bring up the Expression Builder.



14. Drag the word **equal** to the Expression area (or type in an equals sign from your keyboard).

15. Type a single quote (apostrophe), an uppercase N, and close with another single quote. **'N'**

16. Select **OK** to finish. You have now built the query and established filters.



17. Now, save your work by selecting **Report** from the menu bar and **Save** from the drop-down menu.

Report 2 continued

Design

1. Select the **Report Design** icon from the DART window.

2. Set the Page Layout
   - **Page Layout** - Select File from the Menu Bar.
   - Select **Page Setup**.
   - Choose **Portrait**.

3. Set the Report Layout
   - Select **Format** – **Layout**.
   - In the Style, select **Tabular**.
   - Select **OK** at the bottom of the Layout window. Warning appears.
   - Select **OK** - We want to update our design.

   NOTE: In lieu of using Design Layout, you could draw a table in the record band using your Table Frame tool. After you've drawn it, you'll need to define the table as everything in **Sect1.db**. The result will be the same.

4. Create the report header and footer
   - Highlight the Page Band.
   - Select **File – Open – Report**.
   - Highlight a canned report (.RSL) that holds the header & footer you need (remember portrait or landscape).
   - Select the **Edit the report design** radio button. If you don't, you will run the report. You can still get to the report design, it will just take you longer.
   - Select the **Open** button.
   - You are now in the Design for the Report Heading, NOT your design. Errors may appear. You may need to click on OK until you get to the design.
   - Highlight the Header of the report. To do this, select the band that the header is in. Then select **Edit** from the menu bar and **Select All**.
   - If the band holds any other objects, you have to deselect them so that all you have selected is the header.
   - Select **Edit** from menu bar and **Copy** (or you can right click and Copy).
   - Go back to Report 2 by selecting **Window** in the Menu Bar and click on Report2 (you may have a button in the bottom, left corner for this report. If so, you can click the button).
   - You are now back in your design with the page band selected.
   - Select **Edit - Paste**.
   - The header should now be pasted in your design.
   - Go back to Window on the Menu Bar and select the canned report design again.
   - Repeat the steps above to copy the footer into your report's lower page band.

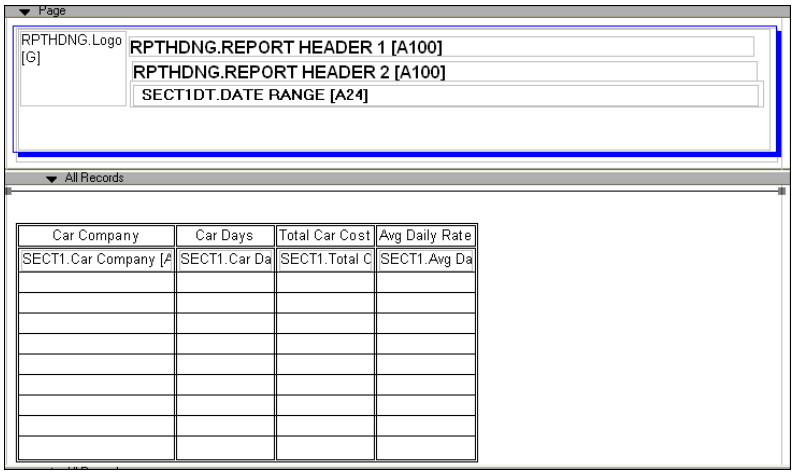
Report 2 continued

5. **Center the table.**
   a. Using the **line tool**. Draw a line above the table from left to right margin. To draw a straight line, hold down the shift key while drawing the line.

   b. Holding down the shift key, select **Line**, **Table**, and both parts of the **Heading**.

   c. Select **Format – Alignment - Align Center** from the main bar. Everything should now be centered in your design.

   d. Delete the line since it's no longer needed.



6. **Make necessary adjustments to the table.**
   a. Move your mouse pointer over any vertical column line (See Arrow 1) or header horizontal line until you get arrows.

   b. Drag target line to resize column or row.

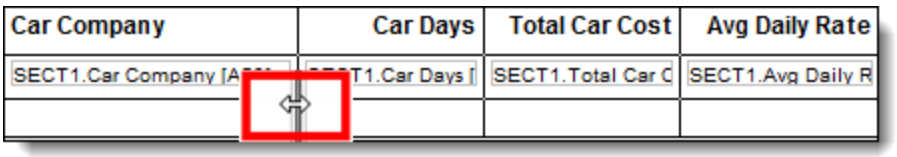
   c. Click on the field you want to move until you get handles around it (remember Containership).

   d. Move the mouse pointer to the left edge of the field until you get horizontal arrows.

   e. Drag it to the right until you make the field the size you want. Leave the field large enough to hold the number of numerical digits expected in that column.

   f. Using your keyboard arrows, move the field left to the desired position.

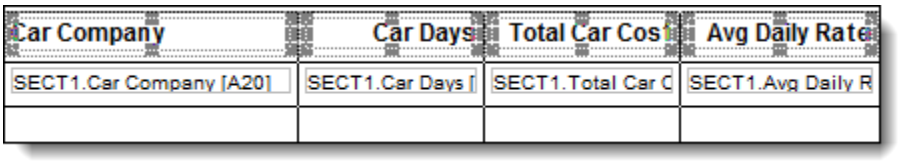
NOTE: Fields containing numbers are right justified. The right border of the field must be placed (right of center) of the column, allowing for half the number of digits expected.



Report 2 Design continued

7. **Align data and headers.**

8. **Make headers bold.**
   a. Click on the header row until selected.
   b. Select Edit, Select All to get handles around all headers.
   c. Right-Click on one of the headers selected.
   d. Select Properties, Font, (Font Style) Bold.



9. **Remove grid lines in the table.**
   a. Select the Table.
   b. Right-click, select Properties – Grid – None.

10. **Add totals.**
    a. Create Totals Fields: Use the Field tool to draw a box below the table in the Record band under the Car Days column.
    b. Un-label: Right click, select **Properties**, and choose the Display type **Edit** then select the **Apply** button.
    c. Select the font, etc.
    d. Copy this field and paste it below the Total Car Cost column and the Avg Daily Rate column.
    e. Define the Car Days total field by right-clicking and selecting **Define Field**. From Sect1.db, select **Car Days**. In Summary, select **Sum**.
    f. Define Total Car Cost field field and use **Sum**.
    g. Define Field for Avg Daily Rate Total. This requires a formula:
       - Right-click, **Define Field**. Click in the Calculated box at the bottom of the Define Field. This will place an X inside the box.
       - Select **Total Car Cost.**
       - Select the **Copy Field** button. This copies to the blank field at the bottom of the window.
       - Place a divide-by sign (/) at end of first copied field.
       - Select **Car Days** from the Sect1.db drop-down list.
       - Select the **Copy Field** button.
       - Select **OK**. Result: Calculated formula is placed in field you designated and the field is named formula.
    h. Use the Text tool and type **TOTALS** to the left of your newly defined totals fields.

11. **Align totals vertically.**
    a. Select a totals field and corresponding data field.
    b. Select **Format, Alignment, Align Right**.
    c. Note: Move the total field to the left of the data field before aligning. This prevents you from inadvertently moving the data field that you already centered.
    d. Repeat for other two fields.

Report 2 continued

12. Align totals horizontally.

a. Select all fields in the totals row including the text field.
b. Select **Format, Alignment, Alight Top.**

13. Make totals bold.

a. With totals still selected, select on of the fields and right-click.
b. Select **Properties, Font**, (Font Style) **Bold**.

14. Remove decimals from Car Days.

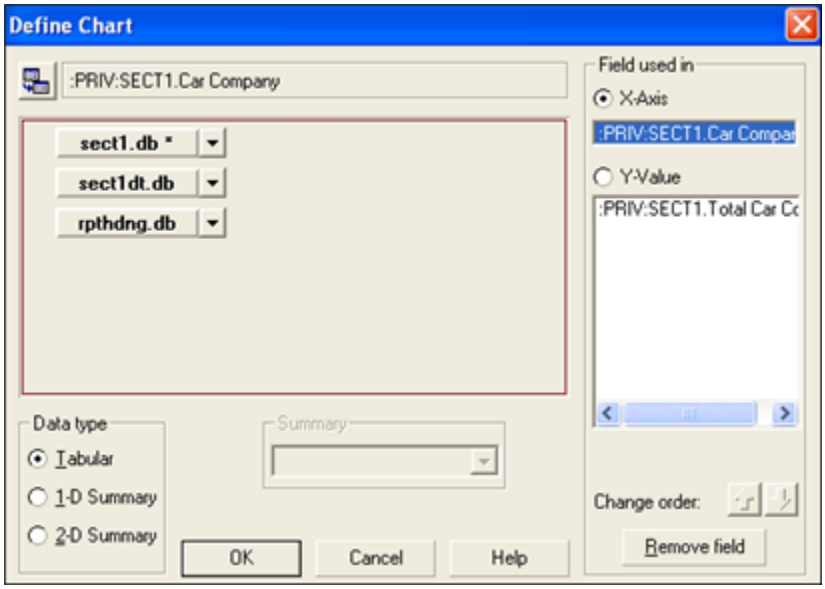
a. Right-click on the field.
b. Select **Properties, Format, Integer**.
c. View data and make final adjustments

Car Company	Car Days	Car Cost	Avg Daily Rate
AUTO EUROPE	2		0.00
AVIS RENT A CAR	363	13,532.27	37.28
BUDGET RENT A CAR	3	79.40	26.47
ENTERPRISE CARS	24	787.91	32.83
HERTZ RENT A CAR	22	947.98	43.09
NATIONAL CAR RENTAL	27	2,320.84	85.96
THRIFTY RENT A CAR	3	89.97	29.99
TOTALS	**444**	**17,758.38**	**40.00**

Report 2 Design continued

15. Add a Graph

a. Using the Chart tool, draw a box about the same size as the table below the table within the record band. You may have to make room below the table first.
b. Define the graph. Select the graph by right-clicking and selecting Defining Chart. You know you are addressing the graph if you have a large mouse pointer within the graph. A small pointer means you are addressing objects within the graph.
c. Select the X Axis radio button.
d. Select **Car Company** from Sect1.db.
e. Select the Y-Value radio button.
f. Select **Total Car Cost** from Sect1.db.
g. Select **OK**.



16. Make adjustments to the graph.

a. Remove space to right.
   - Right-Click on graph (in design).
   - Select **MIN X-VALUES, 1.** Graph bars will fill the graph from left to right.

b. Change values to dollars
   - Right-Click on **Y-Axis Tick marks** (small pointer).
   - Select **Ticks, Number Format, Windows $.**

c. Remove graph Section Stamp
   - Right-Click on graph.
   - Select **Option, Show Title**. This will remove the check mark.

Report 2 Design continued

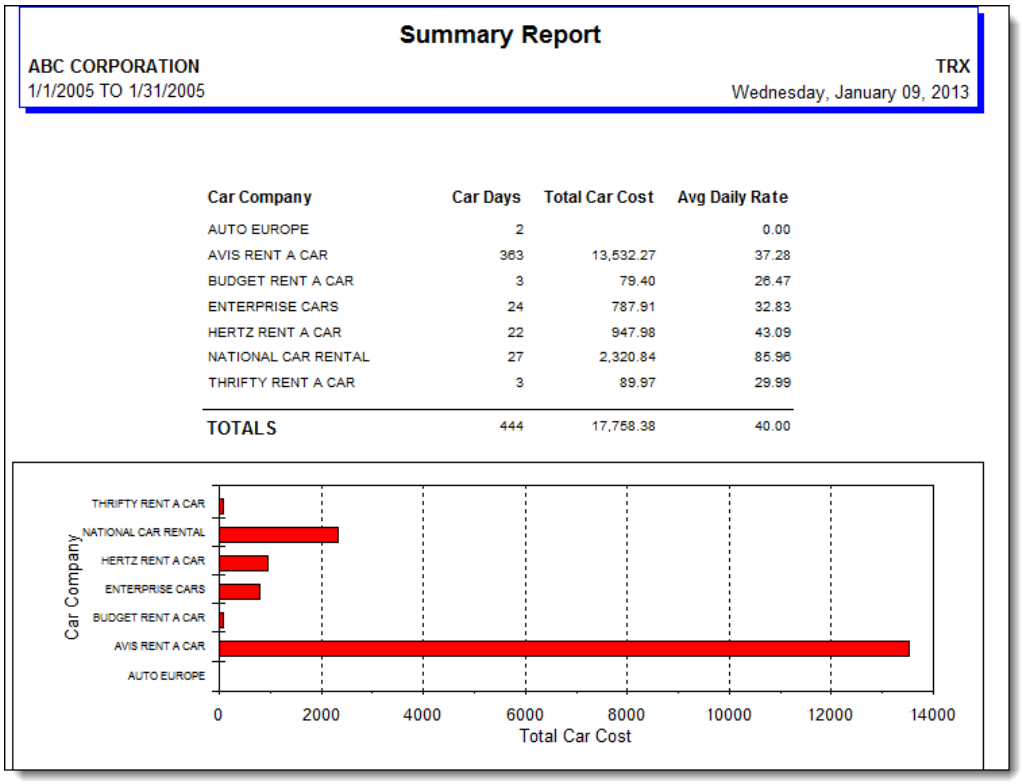
d. Alternate X-Axis labels to allow room for long names.
   - Right-click on **X-Axis** (small pointer).
   - Select **Ticks, Alternate.**

e. Change bar color
   - Right-Click on bar (small pointer).
   - Select **Color** and then choose the new color.

f. Change type of graph
   - Right-Click on graph.
   - Select **Chart Type** and choose from the list.
   - After you've tried a few, select 2D rotated bar.

17. Save report

- Save the report & return to the main menu.
- This completes the design for Report2. .



Summary Report

ABC CORPORATION
1/1/2005 TO 1/31/2005

TRX
Wednesday, January 09, 2013

Car Company	Car Days	Total Car Cost	Avg Daily Rate
AUTO EUROPE	2		0.00
AVIS RENT A CAR	363	13,532.27	37.28
BUDGET RENT A CAR	3	79.40	26.47
ENTERPRISE CARS	24	787.91	32.83
HERTZ RENT A CAR	22	947.98	43.09
NATIONAL CAR RENTAL	27	2,320.84	85.96
THRIFTY RENT A CAR	3	89.97	29.99
TOTALS	444	17,758.38	40.00

Profiles

Assign this report to your ABC profile.

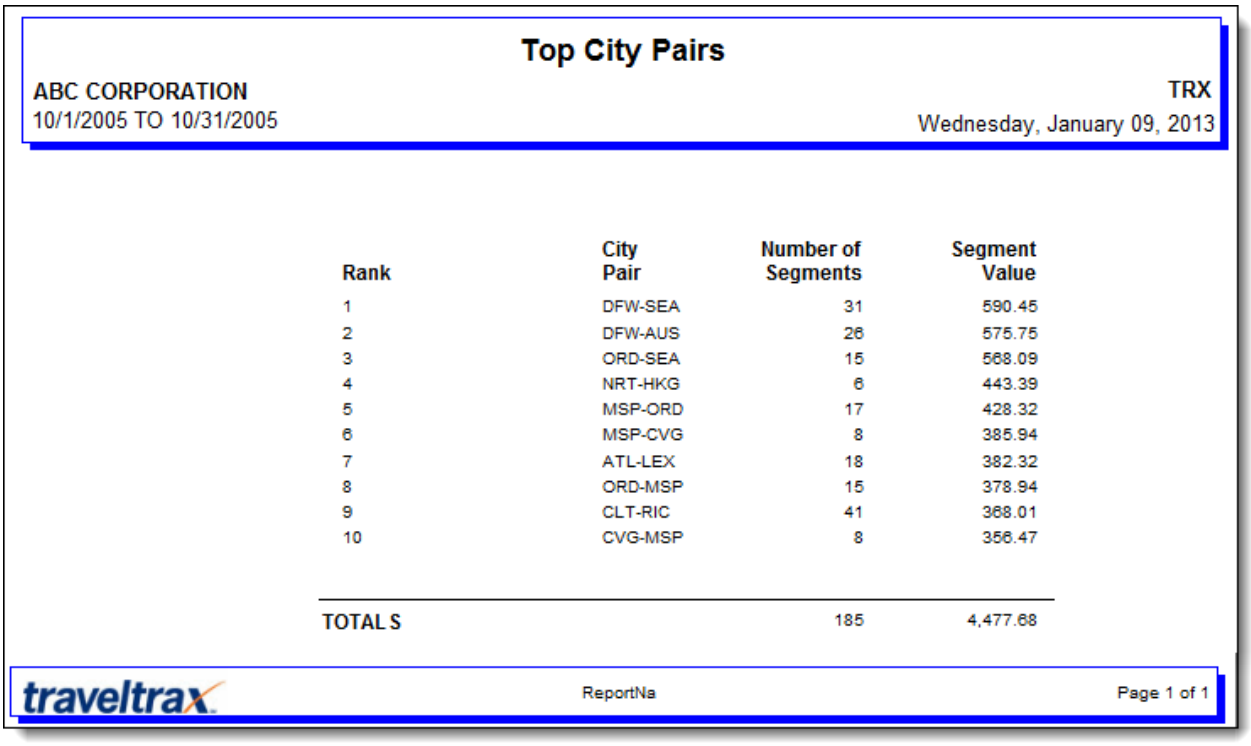
7. From the Main menu, right-click on Report2 and **Assign To**.

8. Select **ABC Corporation** and **Assign**.

Report 3 – Ranking Report

Report three is a ranking report. Ranking requires you to enter a field called ranking, then enter the ranking information and then tell the system which data field you're ranking.

This report will display the top 10 City Pairs based on the Segment Value. We will filter the data to remove voided invoices and select the correct vendor types to display on the report.



Top City Pairs

ABC CORPORATION
10/1/2005 TO 10/31/2005

TRX
Wednesday, January 09, 2013

Rank	City Pair	Number of Segments	Segment Value
1	DFW-SEA	31	590.45
2	DFW-AUS	26	575.75
3	ORD-SEA	15	568.09
4	NRT-HKG	6	443.39
5	MSP-ORD	17	428.32
6	MSP-CVG	8	385.94
7	ATL-LEX	18	382.32
8	ORD-MSP	15	378.94
9	CLT-RIC	41	368.01
10	CVG-MSP	8	356.47
TOTAL S		185	4,477.68

traveltrax ReportNa Page 1 of 1

Create Report

In this section, you'll be creating a new report that will rank the top 10 city pairs based on the number of segments flown to those city pairs.

1. Create a new report.
   - Select the **New** icon from main menu.
   - Select **Report** from the drop down menu. A pop-up window appears.
   - Enter **REPORT3** for the name of the report.
   - Select **OK**.

2. Enter Report Property information.
   - Click On **Report** then **Properties** from the menu bar.
   - Title – **Top City Pairs**
   - Category – **Air Travel**
   - Report Description – **Top 10 City Pair Ranking**
   - Select **OK**.

3. Enter Section Property information.
   - Click on **Section** from the menu bar.
   - Select **Properties**.
   - Date Field – **TS008**
   - Date Period – **MTD**
   - Date Format – **ODBC**
   - Select **OK**.

4. Enter the section description: **Segment Data**

Query

In this section, you'll be creating the query for the report.

1. Enter **City Pairs** in the Description text box type.

2. Drag the fields you want displayed in your report from the Data Dictionary in the Fields position of your DART Query window.
   - **CAL4** – CALC TEXT
   - **CAL2** – Calc Number
   - **TS030** – SegSegmentValue

3. Click in the Field Heading of each column and rename the fields as follows:
   - CAL4 – **City Pair**
   - CAL2 – **Number of Segments**
   - TS030 – **Segment Value**

Report 3 Continued

4. Designate Summary Types. Remember, in all queries that return summarized data, any field that returns a number must have a Summary Type Assigned.
   - Right-click anywhere in the Number of Segments column and select Summary Type.
   - Select **Sum**.
   - Repeat for Segment Value.

Fields

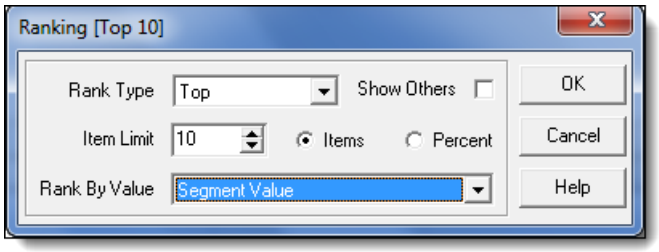
	CAL4	CAL2	TS030
Field Heading	City Pair	Number of Segments	Segment Value
Summary Type		Sum	Sum
Rank Name			
Sort Direction			
Link Field			
Drill Down			

Ranking

To rank something in a report, you have to add the Rank data field and it has to be the first data field on the left in your query.

5. We want the Top 10 city pairs based on the number of segments.

   - Pull up the Dictionary and find **Rank**.
   - Drag it on top of the City Pair field. This will put the Rank field before (to the left of) the City Pair field (the Ranking box will display).
   - Rank Type – **Top**…..Item Limit – **10**…..Rank by Value….**Segment Value**.



The system needs to know what information to rank, so we have to designate the field we need it to rank.

   - Right-click in the City Pair field.
   - Click **Rank**. This will display the level of ranking in the Rank Name section.

Fields

	RANK	CAL4	CAL2	TS030
Field Heading	Level 1	City Pair	Number of Segments	Segment Value
Summary Type			Sum	Sum
Rank Name		Level 1		
Sort Direction				
Link Field				
Drill Down				

Report 3 Continued

6. Add Calculations to the report. In this report, we'll have two calculated fields.

   A. City Pairs – We want the city pairs using the city name, not the code. The calculation you will be building is a SQL statement that will be adding together the Origin City Name and the Destination City Name. [Origin City]+'-'+[Destination City]

   [TS009]+'-'+[TS026]

   - Right click in City Pairs column.
   - Select **Calculation**.
   - Locate the origin city in the Data Dictionary and drag and drop it into the calculation field.
   - Add a dash in between the cities. Do this by typing a plus sign, single parenthesis, dash, single parenthesis, plus sign. **+'-'+**
   - Locate the destination city and drag and drop it into the calculation after the last plus sign.

   B. Number of Segments
   - This calculation will count each row in the data base where it finds each unique city pair.
   - Right-click anywhere in the Number of Segments column.
   - Select **Calculation** from the pop-up menu.
   - Type a **1** in the Expression window. That's it.

7. Add Filters so that no voids are returned and that we're only getting airline and train tickets. Click and drag the following data fields to the filter section.
   - **ID007** (Void Ind) – Right click and Edit Filter **= 'N'**
   - **ID018** (Vendor Type) – Right click and Edit Filter **IN ('BSP','NONBSP')**

8. Save your work.

Design

In this section, you'll create the design for your third report. You will use a table and learn how to define that table.

1. Select the Report Design icon from the DART window.

2. Design the Layout - Draw a box in the Record Band by using the Table Frame Tool.

3. Define the table.
   - Right-click on the table.
   - Select **Define Table**.
   - From **Sect1.db**, select all items in the drop-down list by using the shift key.
   - Select **OK**.

4. View – Zoom – Fit Width.

Report 3 Continued

5. Add a report header and footer in the Page Band.

6. Change the header for Level 1 to Rank and left align the text.

7. Adjust the column widths and header height as desired.

8. Center the data in the columns except for the Rank data field. Remember containership.
   a. Shrink the fields with the mouse pointer. Remember to leave it large enough to hold the number of characters expected.
   b. Move the fields to the right of center using your keyboard. Allow enough room for the largest number.
   c. View results and make minor adjustments as required.

9. Make headers larger and bold.
   a. Select the Header row.
   b. **Edit – Select All**.
   c. Right-Click on one header.
   d. **Properties – Font** (size) **9 bold**

10. Center the Table
   a. Use the Line tool. Remember to hold down the shift key to ensure a straight line.
   b. Select all objects to center.
   c. Format – Alignment – Align Center.
   d. Delete the line since it's no longer needed.

11. Add Totals.
   a. Using the Field tool, draw a box below the table in the record band under the Number of Segments column.
      - Make this an editable field (right click, properties, change from labeled to edit).
      - Define Field - choose **Number of Segs** and Summary – **SUM**.
   b. Copy the field and paste it below the Segment Value column.
   c. Define that field.
   d. Use the Text tool and add **TOTALS** to the right of the totals fields.

12. Align Totals vertically and horizontally.

13. Make totals bold.

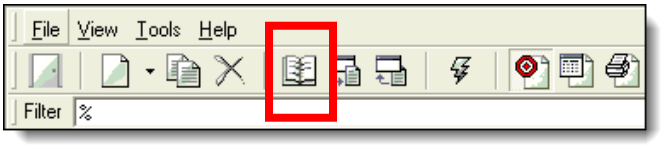
14. Remove decimals from Number of Segment totals and Rank totals.

15. Assign this report to your profiles.

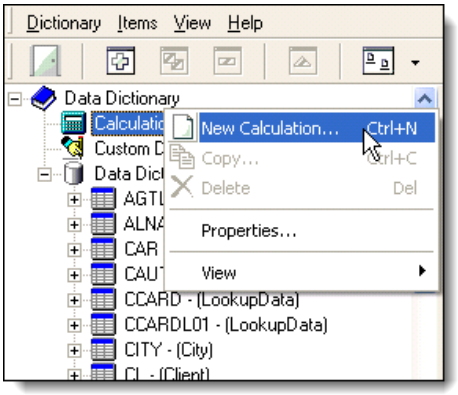
Create a Custom Calculation Field

To create a calculation that will be saved in the Data Dictionary:

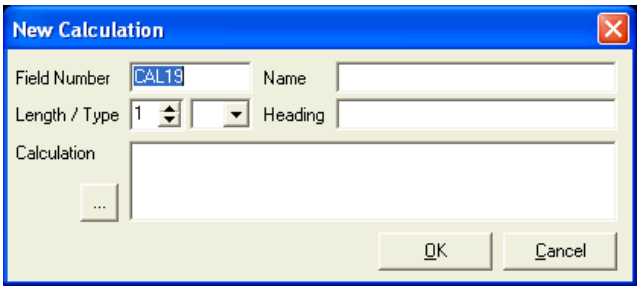
1. Click on the **Main Data Dictionary** icon (from the Main Menu).



2. In the left column under Data Dictionary, click on **Calculations**.
3. Then, right-click on **Calculations** and select **New Calculations**.



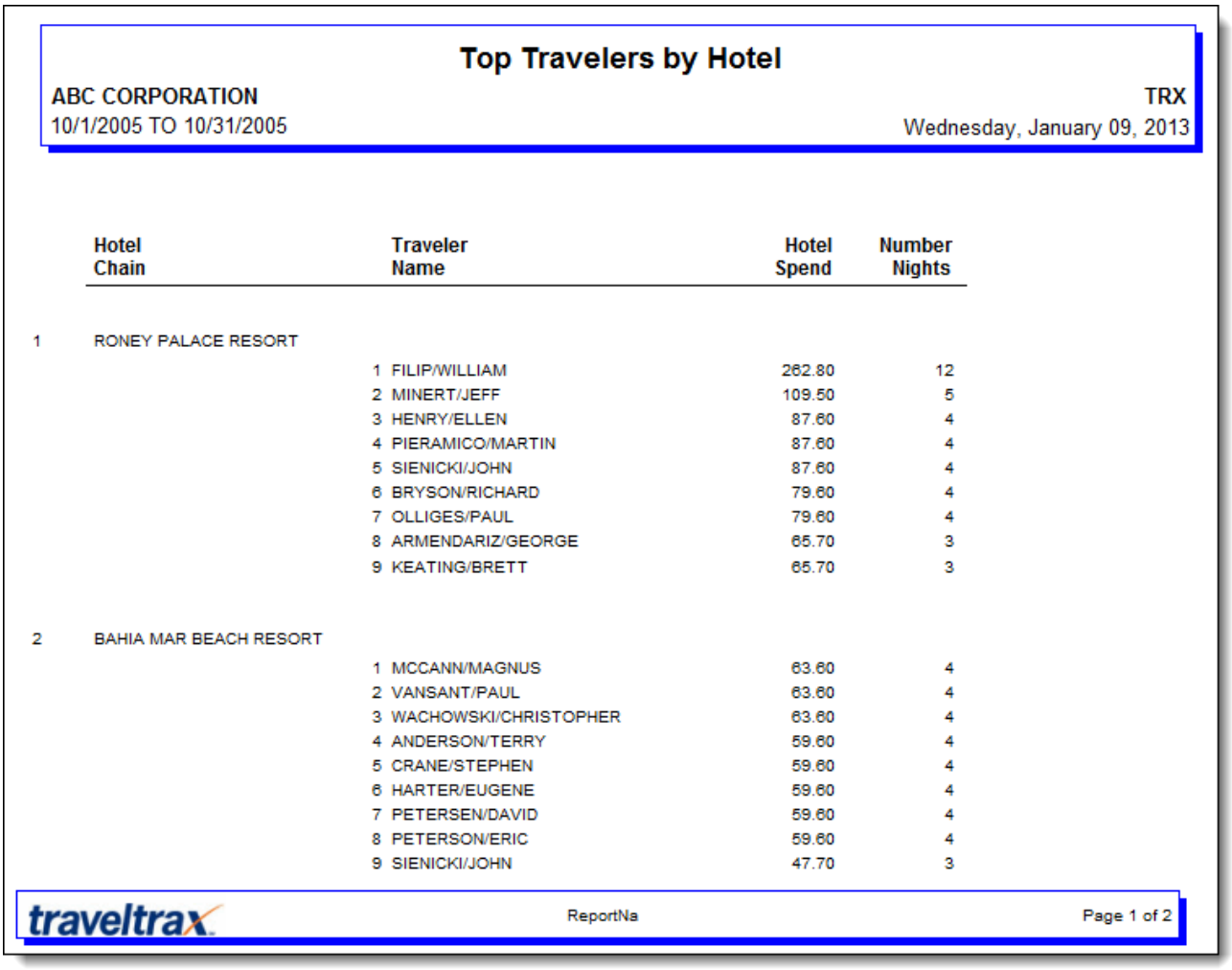
4. Complete the New Calculation window using the following:
   - Field Number – **CAL# (leave whatever # appears)**
   - Name – **Htl Traveler Name**
   - Length - **50**
   - Type – **A**
   - Heading – **Traveler Name**
   - Calculation – **[HTL012]+'/'+[HTL011]**



5. Click **OK**
6. **Save**
7. The data dictionary only updates when you open Desktop Reporting, so we have to close out of Desktop Reporting & open it back up for the new calculation to display in the data dictionary.

Report 4 – Multi-level Ranking Report

Report 4 is a multi-level ranking report. It will display the top 10 Travelers for the Top 5 Hotel. We will add a filter so that data will not pull from voided hotel invoices.



Top Travelers by Hotel

ABC CORPORATION — **TRX**

10/1/2005 TO 10/31/2005 — Wednesday, January 09, 2013

	Hotel Chain		Traveler Name	Hotel Spend	Number Nights
1	RONEY PALACE RESORT				
		1	FILIP/WILLIAM	262.80	12
		2	MINERT/JEFF	109.50	5
		3	HENRY/ELLEN	87.60	4
		4	PIERAMICO/MARTIN	87.60	4
		5	SIENICKI/JOHN	87.60	4
		6	BRYSON/RICHARD	79.60	4
		7	OLLIGES/PAUL	79.60	4
		8	ARMENDARIZ/GEORGE	65.70	3
		9	KEATING/BRETT	65.70	3
2	BAHIA MAR BEACH RESORT				
		1	MCCANN/MAGNUS	63.60	4
		2	VANSANT/PAUL	63.60	4
		3	WACHOWSKI/CHRISTOPHER	63.60	4
		4	ANDERSON/TERRY	59.60	4
		5	CRANE/STEPHEN	59.60	4
		6	HARTER/EUGENE	59.60	4
		7	PETERSEN/DAVID	59.60	4
		8	PETERSON/ERIC	59.60	4
		9	SIENICKI/JOHN	47.70	3

ReportNa — Page 1 of 2

Create Report 4

In this section, we'll enter the report properties and section properties for Report 4.

1. Create a new report.
   - Select the **New** icon from main menu.
   - Select **Report** from the drop down menu. A pop-up window appears.
   - Enter **REPORT4** for the name of the report.
   - Select **OK**.

2. Enter Report Property Information
   - Click on **Report** then **Properties** from the menu bar.
   - Title – **Top Travelers by Hotel**
   - Category – **Air Travel**
   - Description – **Top 10 Travelers for the Top 5 Hotels**
   - Select **OK**.

3. Enter Section Property Information.
   - Click on **Section** from the menu bar.
   - Select **Properties**.
   - Date Field – **HTL007**
   - Date Period – **MTD**
   - Date Format – **ODBC**
   - Select **OK**.

4. Enter the Section Description as **Top 10 Travelers/Top 5 Hotels.**

Report 4 continued

Query

In this section, you'll be creating the query for this report. Think about the information you're trying to get out of this report. You're looking for the Top 10 Airlines for the Top 5 Travelers. Once you determine the results you need, then you'll be able to determine what data fields need to be added to return that information.

1. Enter the following data fields:
   - **Hotel Property**
   - **CAL***(HtlTravelerName)*
   - **Hotel Spend – Cal2 add calculation**
     - [HTL030]*[HTL031]*[HTL034]
   - **Num Nights** – Rename it Number Nights

2. Add the Summary Type **Sum** for Hotel Spend and Number Nights.

3. Rank the Top 5 Hotels and the top 10 Travelers

   a. Hotels
      - Select the Rank field and drag it on top of the Hotel Property column. We want the Top 5 hotel properties based on spend.
      - Set your Hotel Property column to Rank (right-click in the Hotel Property column and select **Rank**).

   b. Travelers
      - Select the Rank field and drag it on top of the Traveler Name column. We want the Top 10 travelers based on the hotel spend.
      - Set your Client column to **Rank** (right-click in the column Traveler Name column and select **Rank**).

HINT: If you haven't set up your summary types before doing your ranking, you will not see any options under the Rank by Value box.

---

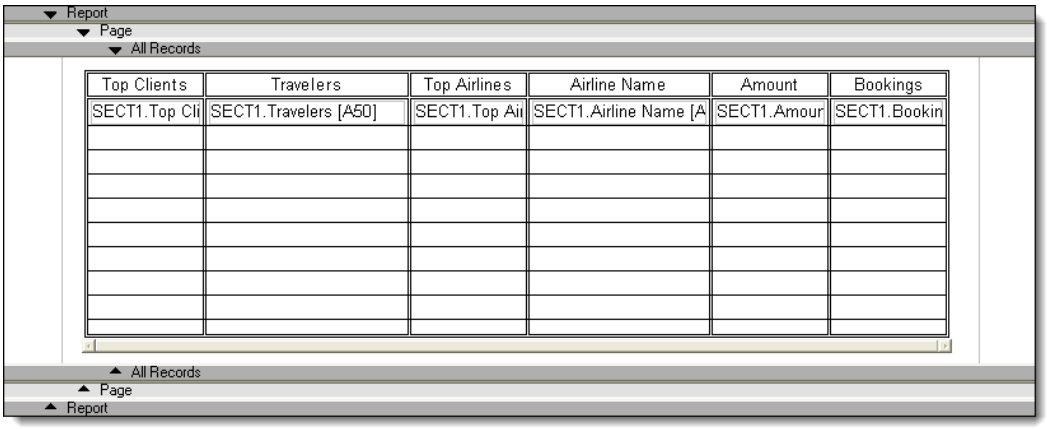
4. Add Filters so that no voids are returned and that we're only getting airline and train tickets. Click and drag the following data fields to the filter section.
   - **HTL008**(Void Ind) – Right click and Edit Filter **= 'N'**

5. Save your work.

Report 4 continued

Design

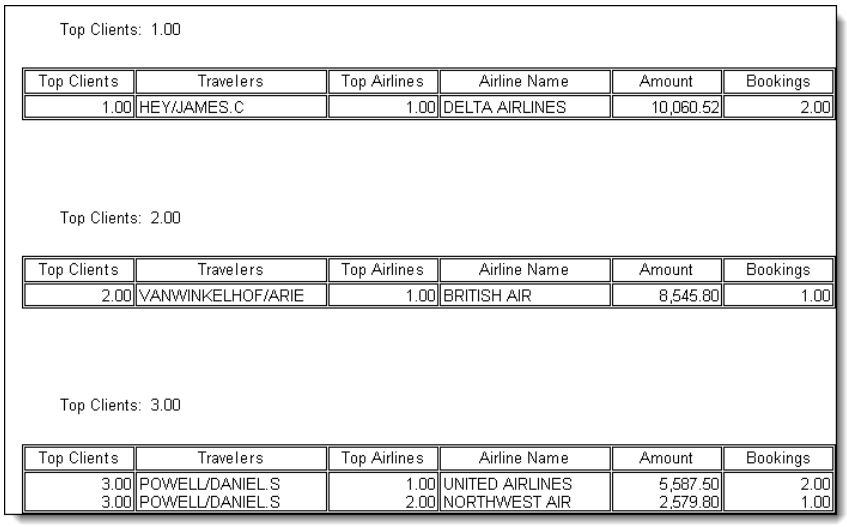
1. Start the Report Design.
2. Set up the Page Layout as Portrait.
3. Set up the Design Layout
   a. Select Format – Layout - **Tabular**.
   b. Remove the fields in the page band.
4. Add the Report Header and Footer in the Page Band.
5. Save the design and return to the TRAVELTRAX main menu.



The organization of this report would be better if we broke out each client and provided a subtotal for each one. So, we're going to separate the report by client. We'll also fix the look of the report. We're going to center the report on the page, center the data in the tables, and remove the decimals from the Rank and Bookings numbers.

Report 4 continued

1. Add Group Band – This will add another band to the design and put the Top Clients field in the new band. This will allow us to provide the data for each client separately instead of having the data repeat
    a. Select the **Add Group Band** tool.
    b. Highlight **Level1** in the Field window.
    c. Select **OK**.
    d. View your report. It should be divided into multiple tables based on the Level1 rank field. Notice that the Level1 field in the table is now redundant so we can delete it. Then we need to add the Traveler Name to that group band group band as well. Once we do that, we can delete that column from the table in the Report Band as well.



Top Clients: 1.00

Top Clients	Travelers	Top Airlines	Airline Name	Amount	Bookings
1.00	HEY/JAMES.C	1.00	DELTA AIRLINES	10,060.52	2.00

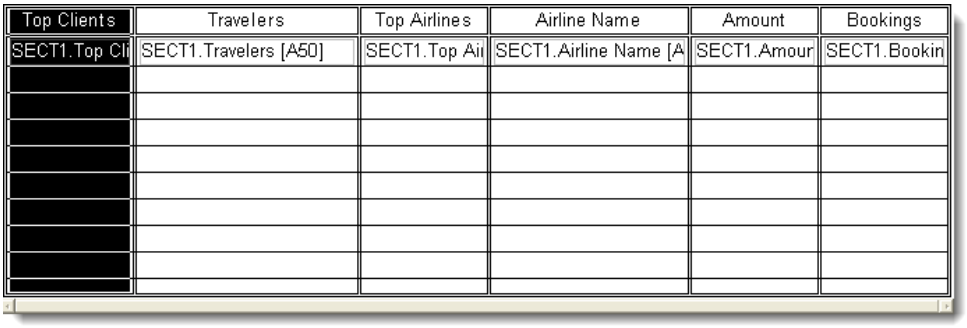
Top Clients: 2.00

Top Clients	Travelers	Top Airlines	Airline Name	Amount	Bookings
2.00	VANWINKELHOF/ARIE	1.00	BRITISH AIR	8,545.80	1.00

Top Clients: 3.00

Top Clients	Travelers	Top Airlines	Airline Name	Amount	Bookings
3.00	POWELL/DANIEL.S	1.00	UNITED AIRLINES	5,587.50	2.00
3.00	POWELL/DANIEL.S	2.00	NORTHWEST AIR	2,579.80	1.00

2. Un-Lable the Top Clients' data field and make it size 9, bold.



Top Clients	Travelers	Top Airlines	Airline Name	Amount	Bookings
SECT1.Top Cl	SECT1.Travelers [A50]	SECT1.Top Ai	SECT1.Airline Name [A	SECT1.Amour	SECT1.Bookin

3. Copy the Passenger Name data field from the table and Paste it in the Group band to the right of the Top Clients' field.

4. Align the Top Client and Passenger Name data fields.

Report 4 continued

5. In a blank row below the data field of the Top Clients' column, click until the column turns black.
6. Hit the Delete key on your keyboard.
7. Repeat these steps for the Passenger Name column in the table.
8. Remove the grid lines from the table.
9. Move the table to the right as far as possible.
10. Table Adjustments
    - Adjust column widths and header height as desired.
11. Align data in columns
    a. Shrink fields with your mouse pointer. Remember to leave it large enough to hold the number of numerical digits expected.

    b. Move fields to the right of center using your keyboard. Allow enough room for largest numbers.

    c. View the results and make minor adjustments as required.
12. Change column headers – size 9 bold.
13. Add Totals.
    a. Using the Field tool, draw a box below the table in the record band under the Amount column.

    b. Un-label.

    c. Define the field.
       - From Sect1.db, choose Amount and select SUM as the summary type.

    d. Copy that field and paste below Bookings.

    e. Define Bookings field.

    f. Use the Text tool and add **Totals** to the right of the totals field.
14. Align Totals vertically – Right. Repeat with other field.
15. Align Totals horizontally – Top.
16. Select Minimum height for all 3 fields.
17. Make the **Client Totals** field bold.
18. Remove decimals from the totals of Bookings, Top 3 Clients, and Top 5 Airlines.
19. Remove space in all bands.

Report 4 continued

20. Add Final Totals.
   a. Previous totals are now sub-totals.
   b. Copy sub-totals fields (all at once).
   c. Paste in Report Band.
   d. Edit text in report totals as **Final Totals.**

21. Save your work.

22. Assign this report to 3 of your profiles.

Linking Reports

With multi-section reports, sections may have data from different tables in the database or data from the same table for different time periods. Linking is necessary in order to display this data in a meaningful format.

Example:
Suppose you wanted to produce a report that displayed a list of passengers, the amount of their tickets, and the air segments they flew. If you put both ticket information and segment information in the same section (they are in different tables), you would get a report that duplicated the ticket price for each segment the passenger flew. Also, if there was a passenger with no segment information, the passenger would not display even though he existed in the ticket table. (This is a function of relational databases.)

- If you put ticket information in the first section and segment information in the second section, you would get a report that made no sense. Passenger names and ticket prices would be displayed independent of segment information. You would have a hard time determining which segment information went with which passenger.

- To solve these problems a linking report needs to be created. Section one would contain ticket information and section two would contain air segment information. Section two would then be linked to section one. The specific procedures will be shown later.

When you want the report to show any part of the itinerary (the actual airline, rail, car, and/or hotel segments), you need to link them together using the 3 primary keys: RecordKey, IataNum, and SeqNum. Put each of these data fields in each section that will hold itinerary data and then link them together.

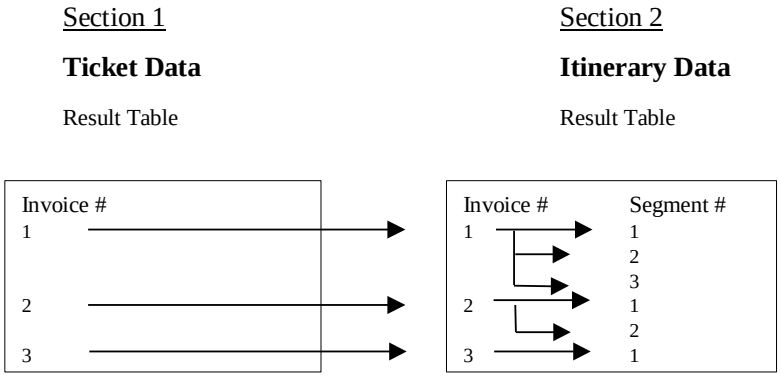
If you're using Paradox as the design tool, linking can be done within the query and is a 2 step process. You have to enter the section you want to link back to in the section properties and then you have to link the data fields from the current section back to the other one.

NOTE: If you're using Excel as the design tool, you still need to add the three primary keys, you just wouldn't create any linking. Excel doesn't accept the linking. You'd have to create code within Excel to do the linking.

One to Many Link Overview

One to Many Link should be used when the linked sections' result tables do not match (e.g. when there are multiple segments for each ticket row).

One to Many Link



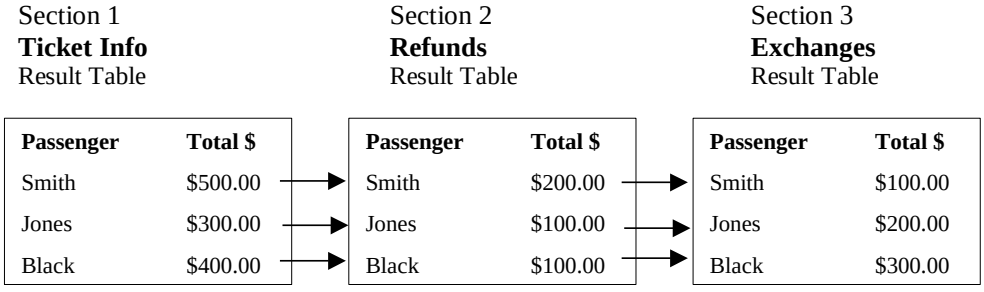
If these sections were not linked, you would have two separate tables on the report showing separate sets of data. Each table could be a different size. Because passengers generally have multiple segments on one ticket, the section 2 table would be bigger than section 1 and individual segments would probably not be on the same line as the ticket record for each passenger.

One to One Link Overview

One to One Link should be used when the results from the linked sections match row by row.

- In the example below, Section 2 and 3 are linking back to section 1.
- Section 1 is the Master Table.
- Sections 2 and 3 are matching their records back to section 1.
- One result field from section 1 links to one result field in section 2 and one result field in section 3. This type of linking allows the data from each section to be put in one table in the report design.

One to One Link



Type	Origin City Code	Destination City Code	Origin City Name	Destination City Name	Origin Region Code	Destination Region Code
All Connections	TS009	*TS026*	*ORIG003*	*SDEST003*	*ORIG005*	*SDEST005*
No Connections (NOX)	TS009	*TS037*	*ORIG003*	*XDEST003*	*ORIG005*	*XDEST005*
No Connections - Minute Rule	TS009	*TS049*	*ORIG003*	*MDEST003*	*ORIG005*	*MDEST005*
Market City Pairs (All Connections)	TS034	*TS035*	*SMORIG003*	*SMDEST003*	*SMORIG005*	*SMDEST005*
Market City Pairs (NOX)	TS045	*TS046*	*XMORIG003*	*XMDEST003*	*XMORIG005*	*XMDEST005*
Market City Pairs - Minute Rule	TS057	*TS058*	*MMORIG003*	*MMDEST003*	*MMORIG005*	*MMORIG006*

Type	Origin Region Name	Destination Region Name	Return Indicator (is not null)	Segment Value	Intl/Dom Ind (D or I)	Seg Miles	Total Miles	Selection Criteria
All Connections	*ORIG006*	*SDEST006*	*TS036*	*TS030*	*TS027*	TS031	TS032	*None*
No Connections (NOX)	*ORIG006*	*XDEST006*	*TS048*	*TS041*	*TS038*	TS042	TS043	*TS037>A*
No Connections - Min Rule	*ORIG006*	*MDEST006*	*TS060*	*TS053*	*TS050*	TS054	TS055	*TS049>A*
Market City Pairs (All Connections)	*SMORIG006*	*SMDEST006*	*TS036*	*TS030*	*TS027*	TS031	TS032	*TS035>A*
Market City Pairs (NOX)	*XMORIG006*	*XMDEST006*	*TS048*	*TS041*	*TS038*	TS042	TS043	*TS046>A*
Market City Pairs - Min Rule	*MMORIG006*	*MMDEST006*	*TS060*	*TS053*	*TS050*	TS054	TS055	*TS058>A*

Tips for Segment Reporting:

If you want to use the segment value that comes from your back office system you can choose that field from the TranSeg table.

To prorate the segment value based on the segments mileage as compared to the total mileage use the following formula:

- SegmentMileage / TotalMileage x Amount - the amount can be the Ticket Price, Base Fare, etc.

To make a query with no return segments use the following in selection criteria:

- ReturnInd is null

To enter string data (text) you must place it within a SQL statement (e.g. OriginCity + DestinationCity) You must use the MS SQL Server format function. This function takes the arguments and strings them together.

- argument1 + argument2

To place a separator between the two arguments you must add in the separating characters enclosed in single quotes.

- The result: [ORIG003] + ' - ' + [SDEST003]

Sample Travel Itinerary:

1 DL 928F 07JUN J *MIAJFK HK1 235P 545P
2 DL 82J 07JUN J JFKNCE* HK1 700P 940A+1 (08JUN)
3 LX 563C 14JUN J *NCEZRH HK1 1040A 1200N
4 LX 64C 14JUN J ZRHMIA* HK1 105P 530P

Flight(s)

A Flight corresponds to a segment flown. Segment 1 above is a flight between MIA (Miami) and JFK (New York JFK Airport). Reporting flights would be represented by 4 unique city pairs for the sample itinerary. In TRAVELTRAX refer to "All Connections".

Trip(s)

Some companies might use this term to mean the number of airline tickets, but the strict definition refers to the true destination. That means an origin city to a destination city where you stay overnight, not where you connect to another flight.

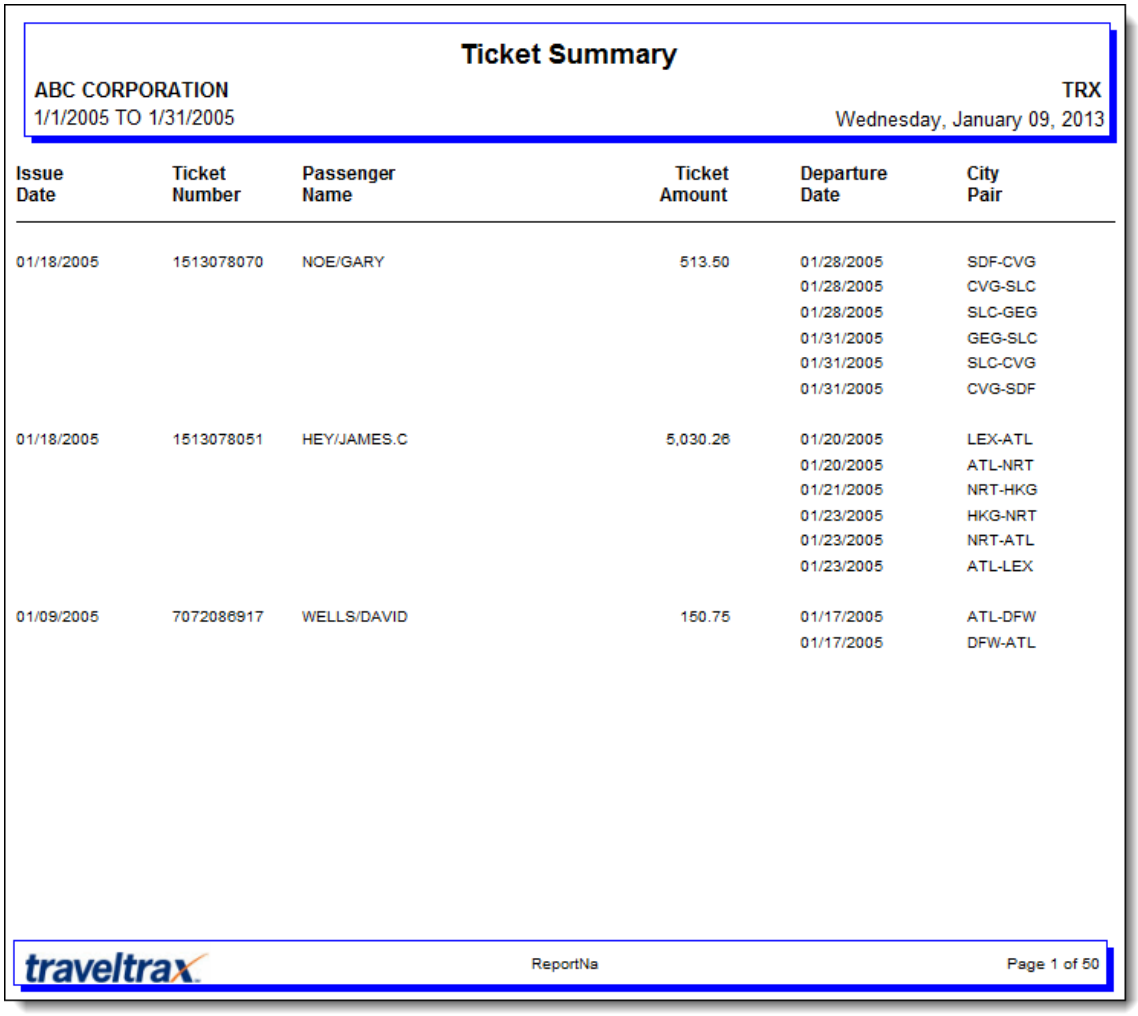
For the sample above there are 2 trips. One trip is MIA (Miami) to NCE (Nice) and 1 trip NCE-MIA. In TRAVELTRAX we refer to this as the MIN Destination field.

Market(s)

Similar to a trip, a market is the origin and destination of a trip reflected alphabetically. In this example, there are 2 trips in the NCE-MIA market (but only one market). In TRAVELTRAX refer to Min Market Destination.

Report 5 – Linking Report

This report has ticket data and segment data. They need to be put in separate sections so that the ticket information is not repeated for each airline segment in the itinerary.



Ticket Summary

ABC CORPORATION — TRX
1/1/2005 TO 1/31/2005 — Wednesday, January 09, 2013

Issue Date	Ticket Number	Passenger Name	Ticket Amount	Departure Date	City Pair
01/18/2005	1513078070	NOE/GARY	513.50	01/28/2005	SDF-CVG
				01/28/2005	CVG-SLC
				01/28/2005	SLC-GEG
				01/31/2005	GEG-SLC
				01/31/2005	SLC-CVG
				01/31/2005	CVG-SDF
01/18/2005	1513078051	HEY/JAMES.C	5,030.26	01/20/2005	LEX-ATL
				01/20/2005	ATL-NRT
				01/21/2005	NRT-HKG
				01/23/2005	HKG-NRT
				01/23/2005	NRT-ATL
				01/23/2005	ATL-LEX
01/09/2005	7072086917	WELLS/DAVID	150.75	01/17/2005	ATL-DFW
				01/17/2005	DFW-ATL

traveltrax — ReportNa — Page 1 of 50

1. Create a new report and name it **REPORT5**.

2. Report Properties
   - Title – **Ticket Summary**
   - Category – **Air Travel**
   - Description – **Ticket summary including flight segments**

3. Section Properties – Enter the following:
   - Date Field – **ID006**
   - Date Period – **Monthly**
   - Date Format – **ODBC Date**

4. Section Description: Ticket Data

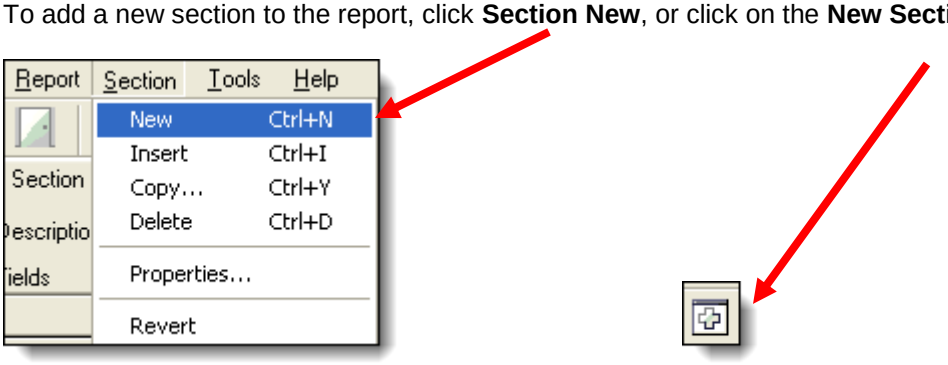
Report 5 continued

Query

5. Enter the following data fields in section 1.
   - **ID001** – Record Key
   - **ID002** – IataNum
   - **ID003** – SeqNum
   - **ID006** – Issue Date
   - **ID015** – Ticket Number
   - **CAL4** – Passenger Name
     - Right-click and create a calculation
     - ID011+'/'+ID010
   - **ID029** – Ticket Amount

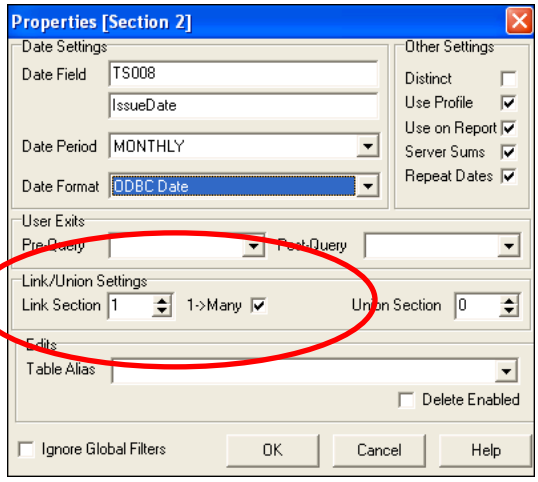
6. Add Filters to Global filters by clicking on the Global radio button.
   - Use the filters so only airline tickets are returned but voided tickets are not.

7. To add a new section to the report, click **Section New**, or click on the **New Section** button.



8. Enter the Section Description of **Segment Data**.

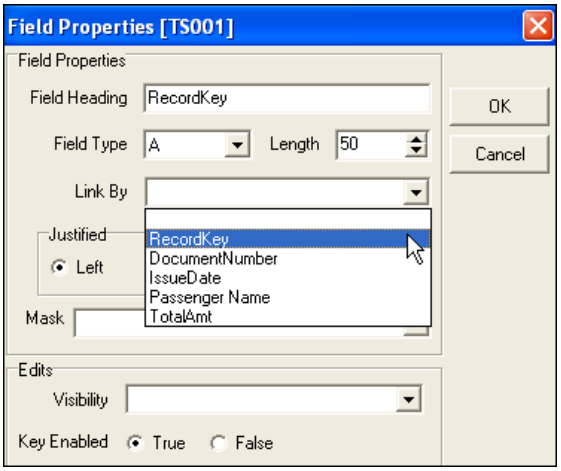
9. Enter the following properties for Section 2
   - Date Field: **TS008** – IssueDate (since this section will contain segment data, you pull the date from that data table).
   - Date Period: **MONTHLY**
   - Date Format: **ODBC Date**
   - Enter a **1** in the Link Section to link this section back to section 1. (First step)
   - Enter a checkmark in **1>Many**.



Report 5 continued

10. Place the following data fields in the Section 2 Query:
- **TS001** – Record Key
- **TS002** – IataNum
- **TS003** – SeqNum
- **TS015** – Departure Date
- **CAL4** – City Pair (TS009 +' - '+ TS026)

11. Link the Record Key, IataNum, and SeqNum query fields to those fields in section one. To do that, follow the steps below.



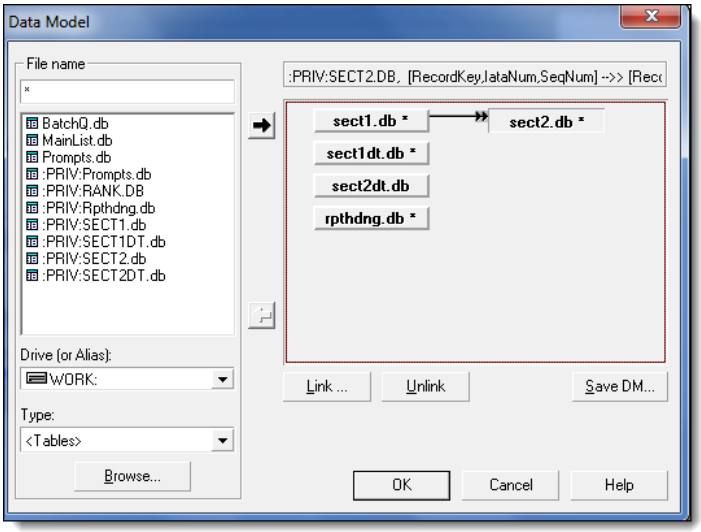
- Right-click the RecordKey data field and select Properties.
- Using the drop-down-arrow next to Link By, select **RecordKey.** This links the Record Key in this section to the RecordKey in the section you designated in the section properties (in our case, section 1).
- Click **OK**.
- Repeat these steps for the **IataNum** and **SeqNum**
- This completes the linking process

Design

1. Select the Report design icon

2. Once in the Paradox design tool, you can verify that the one-to-many link was captured by looking at the Data Model.
- Select **Format** from the menu bar.
- Select **Data Model**.

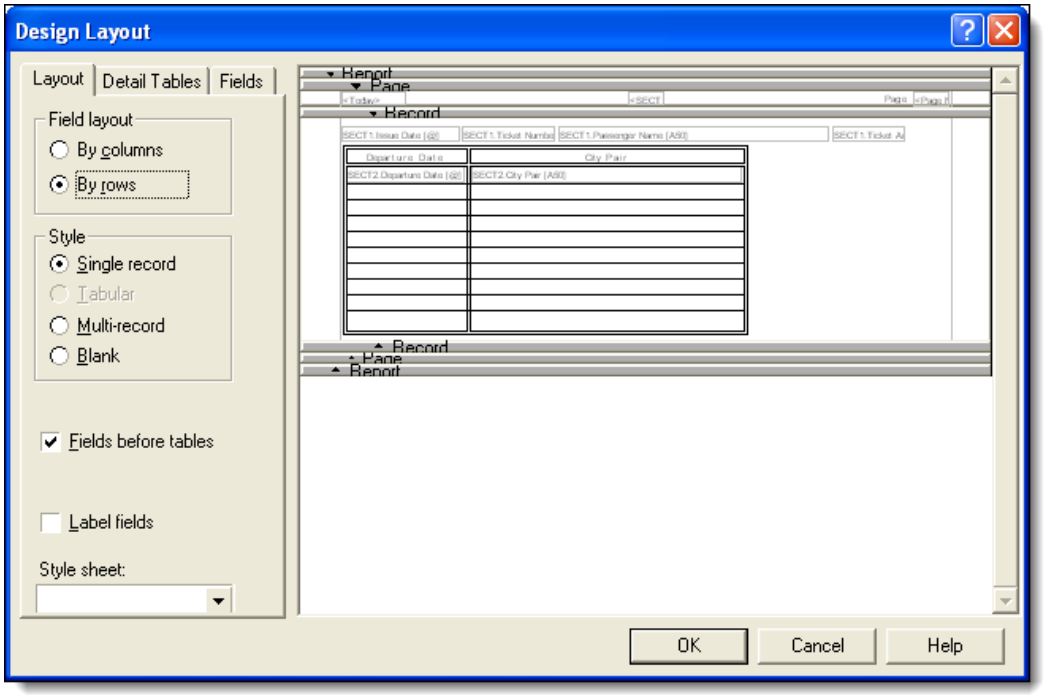
Notice that there is an arrow with a double point from sect1.db to sect2.db. This indicates that the link was captured. Double-click on the arrow and it will open the Link button. Click on the link button so you can see what field this report is linked on.



Report 5 continued

3. To build the design for this report, you can construct it manually by using the design tools on the icon bar or you can use Paradox's automated design feature. We'll introduce the automated feature here. If you didn't delete the Record Key, IataNum, and SeqNum fields in the layout, do so now. We don't need to see them in the report. They are only used when the query runs to link the data fields.

   - Select **Format** from the menu bar
   - Select **Layout**
   - Select **Single Record**
   - Select **By Rows**
   - Uncheck the **Label Fields** box

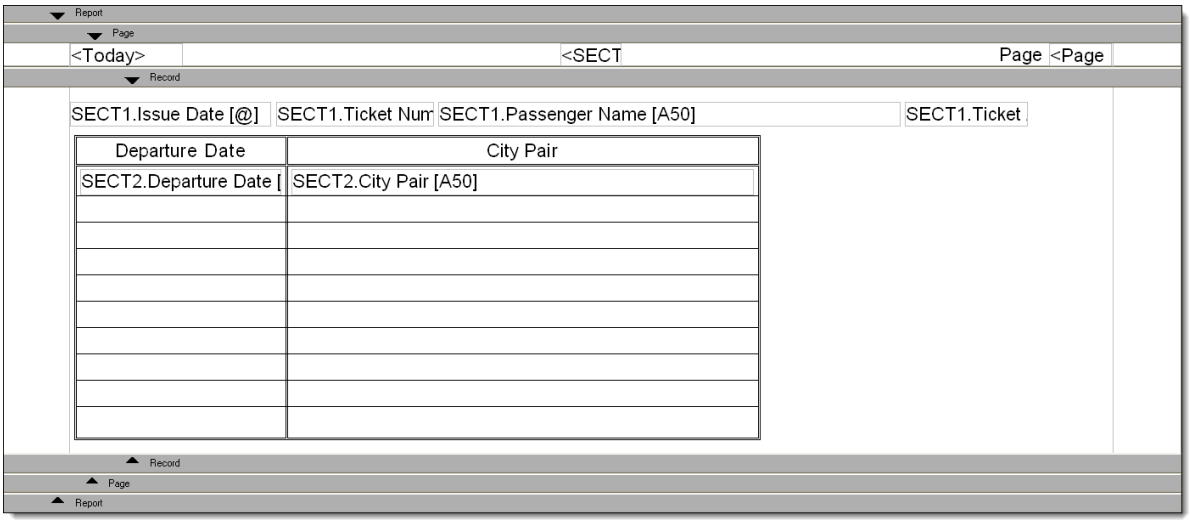


NOTE: When doing a One to Many link, the Tabular option and the Table Frame Tool are not available for use. In the Format Layout, the Single Record option must be used.

Report 5 continued

Report 5 Design continued

At this point, your design should look like the following:



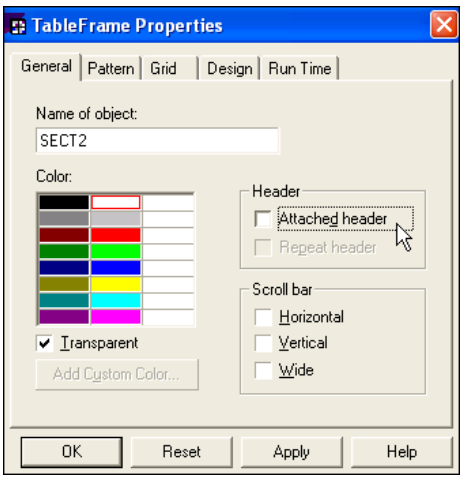
To make our design look presentable, there are still a few things we need to do:

4. Move the Ticket Number field to the left margin and line up the other individual fields, in the order you want them, left to right. You might want to resize the Passenger Name field to make it fit easier.

5. Delete the headers in the table.

6. Select the table, right-click, select **Properties**.

   - On the General page, un-check the **Attached Header** box and select **OK**.
   - After the header is selected, use your delete key to remove the headers.



Report 5 Design continued

7. Delete the 3 objects from the page band. We will enter our own headers later.

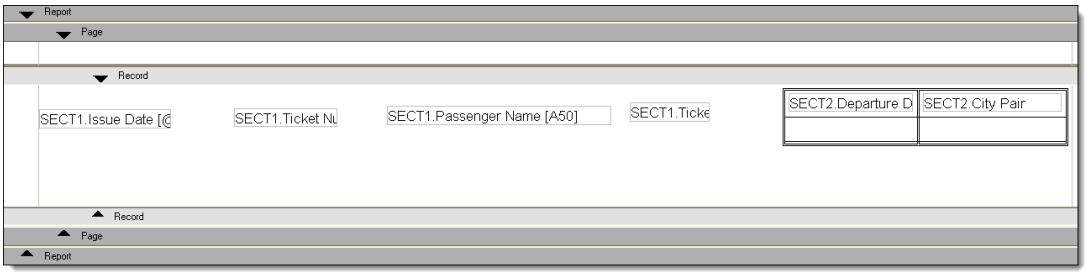
8. Shrink the city pair column in the table.

9. Move the table to the right margin and make sure it is higher than the other data fields.

10. Select all data fields (even the ones within the table), and make the text a size 8.

11. Adjust all data fields to the minimum height.

12. To prevent space from showing up between each record, shrink the table upward so that only the table's defined fields are visible and one white row is visible (for now).



13. Align objects and text for all fields.

14. Change the format of both of the date fields so they only show the date, not the time.

15. Change the format of the total amount to show a currency sign (if it doesn't already have one).

16. Remove the table lines (grid).

17. Create column headers

18. Add a totals field in the report band.

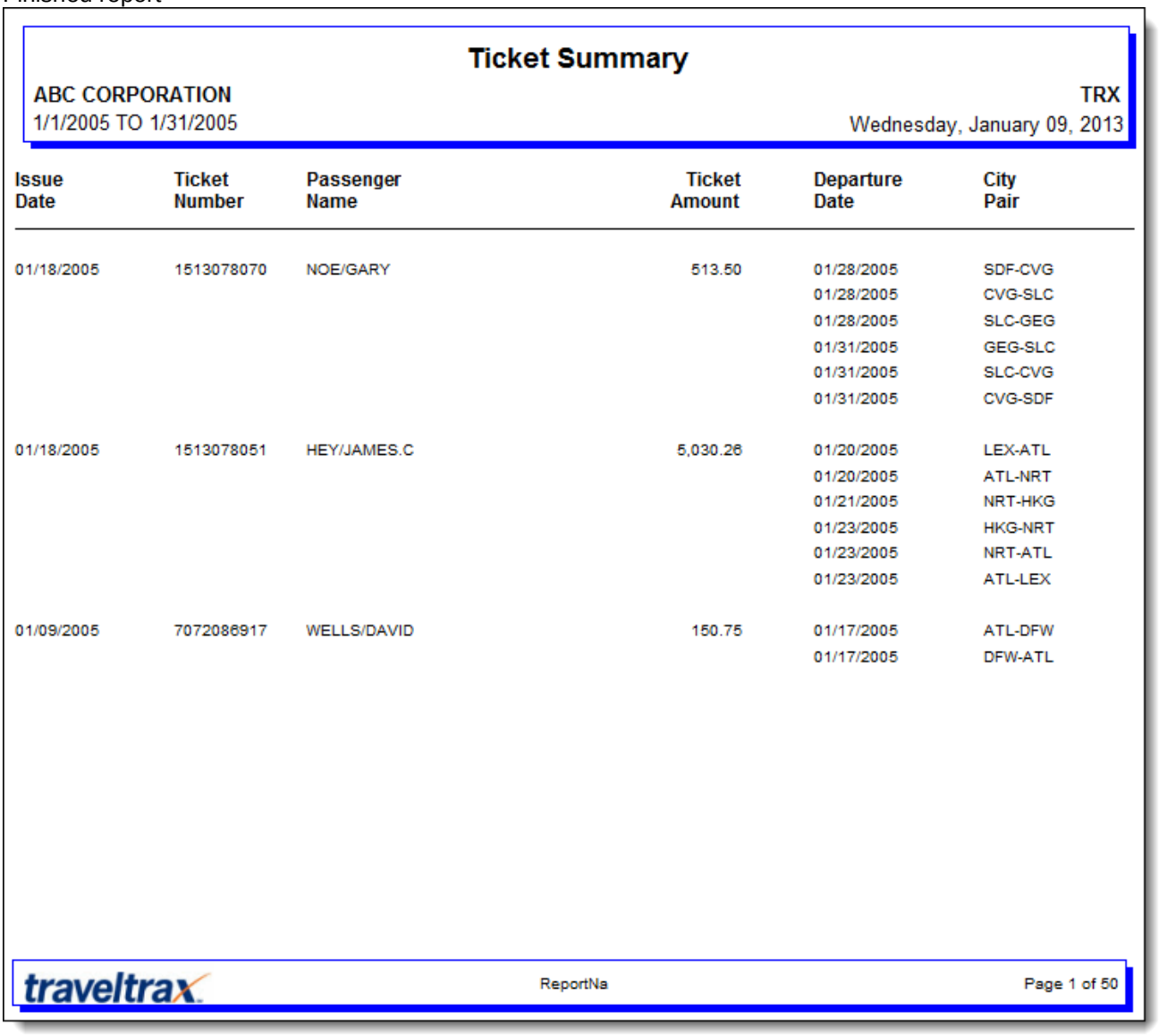
19. Align all objects again.

20. Add a page header and footer.

21. Shrink the table so only one row shows.

22. Shrink any bands to take out unnecessary space.

Finished report



Ticket Summary

ABC CORPORATION **TRX**
1/1/2005 TO 1/31/2005 Wednesday, January 09, 2013

Issue Date	Ticket Number	Passenger Name	Ticket Amount	Departure Date	City Pair
01/18/2005	1513078070	NOE/GARY	513.50	01/28/2005	SDF-CVG
				01/28/2005	CVG-SLC
				01/28/2005	SLC-GEG
				01/31/2005	GEG-SLC
				01/31/2005	SLC-CVG
				01/31/2005	CVG-SDF
01/18/2005	1513078051	HEY/JAMES.C	5,030.26	01/20/2005	LEX-ATL
				01/20/2005	ATL-NRT
				01/21/2005	NRT-HKG
				01/23/2005	HKG-NRT
				01/23/2005	NRT-ATL
				01/23/2005	ATL-LEX
01/09/2005	7072086917	WELLS/DAVID	150.75	01/17/2005	ATL-DFW
				01/17/2005	DFW-ATL

traveltrax ReportNa Page 1 of 50

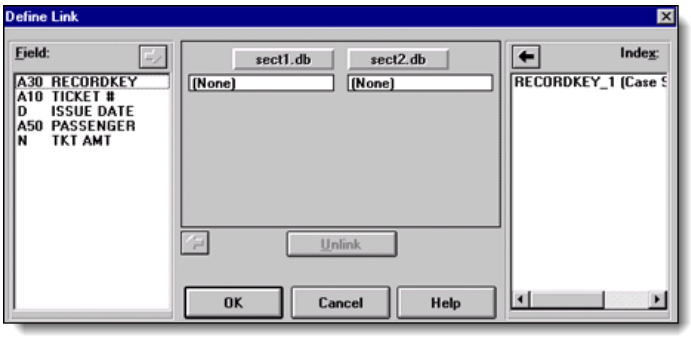
Report 5 continued

Create link in Paradox

If your Data Model did not show the links, you can create them manually by following the steps outlined below.

1. Left-click and hold down the mouse button on the Sect1.db button.

2. Drag the mouse pointer down until it's on top of Sect2.db and then release the left mouse button. If you do this properly, a Define Link window will appear (see below).



3. To establish the link, highlight **Recordkey** in the left window. Just above it a right facing arrow will appear. Select it. This will automatically establish the link to Recordkey in section 2. (You could also double-click on Recordkey). Remember, the object in each section has to be the same type and size. If it is NOT, you will not be able to create the link.

4. Select OK to return to the data model. Notice that there is now a double headed arrow displayed between sect1.db and sect2.db. This confirms that you now have a valid one-to-many link between the two sections. You're now free to define the table in your design as section 2.

Delete Design

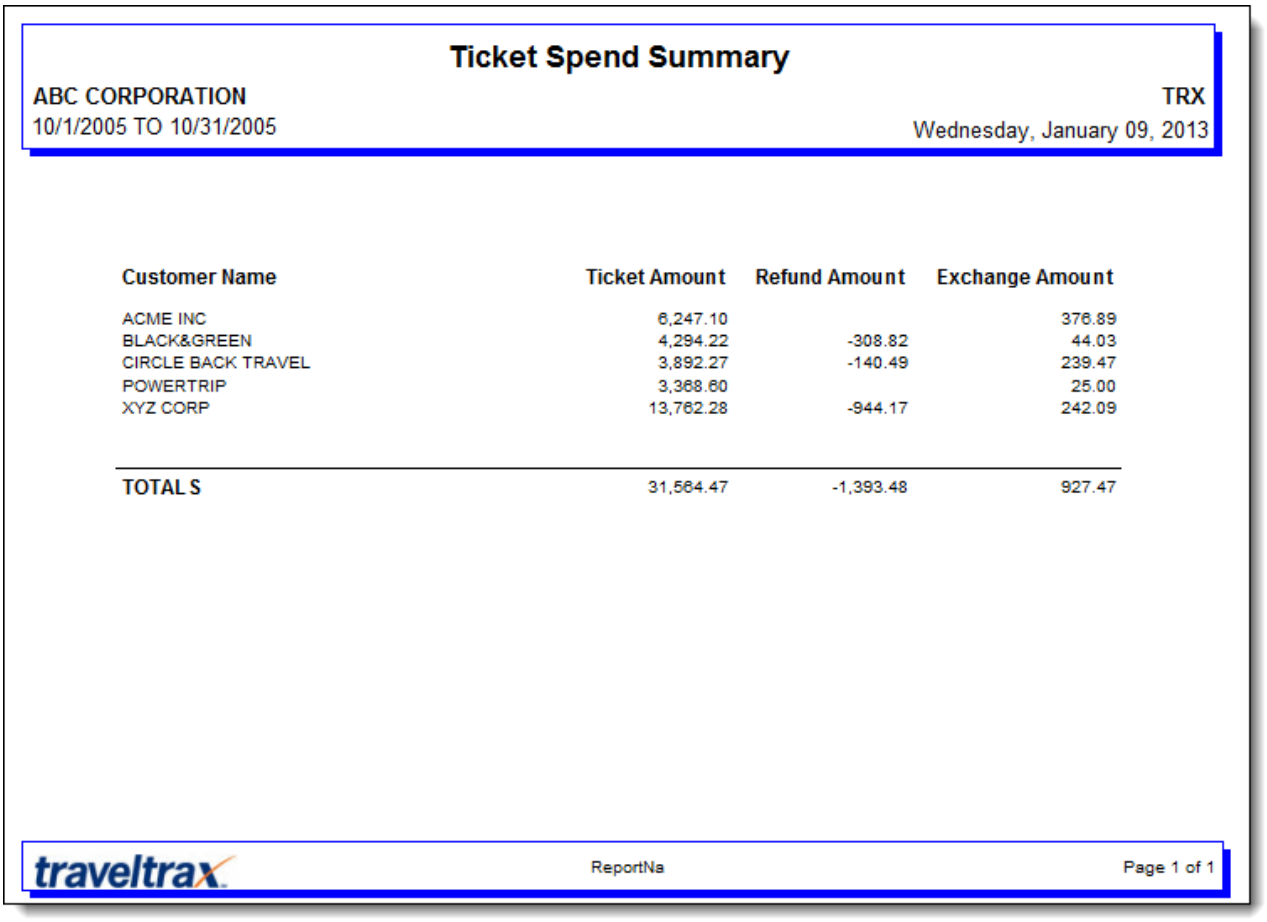
If you've created a design for your report and the design doesn't work or if you've selected the wrong design tool, you have the option to delete the current design and start over. You will not lose your query, just the design of the report.

1. Close out of the report.
2. From the Main Menu, right-click on the report name.
3. Select **Delete Design** (be careful not to select Delete as that will delete the entire report).
4. Now, when you right-click again, you can select **Edit Design** and select a new design tool.

For this report, let's see what

Report 6 – One to One Link

This will be a three section report with sections 2 and 3 linking back to section 1. Section 1 will be the master section containing the main ticket information; section 2 will be similar but will only include refunds, and section 3 will only include exchanges.



Ticket Spend Summary

ABC CORPORATION **TRX**
10/1/2005 TO 10/31/2005 Wednesday, January 09, 2013

Customer Name	Ticket Amount	Refund Amount	Exchange Amount
ACME INC	6,247.10		376.89
BLACK&GREEN	4,294.22	-308.82	44.03
CIRCLE BACK TRAVEL	3,892.27	-140.49	239.47
POWERTRIP	3,368.60		25.00
XYZ CORP	13,762.28	-944.17	242.09
TOTAL S	31,564.47	-1,393.48	927.47

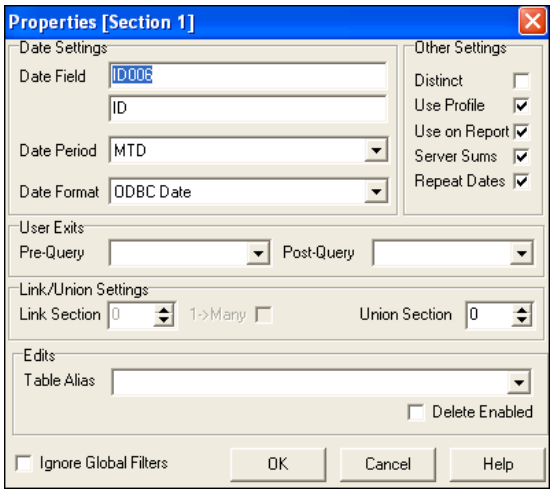
traveltrax ReportNa Page 1 of 1

Report 6 continued

1. Go to the Main Menu and create a new report called **REPORT6**.

2. Report Properties
   - Title – **Ticket Spend Summary**
   - Category – **Spend Management**
   - Description – **Ticket Spend summary includes ticket, refund, and exchange amounts.**

3. Section 1 Properties
   - Issue Date - **ID006**
   - Date Period – **Month to Date**
   - Date Format – **ODBC Date**



4. Section Description – **Ticket Data**

Query

5. Complete the Section 1 query
   - **CL003 –** Customer Name
   - **ID029 –** Total Ticket Amount **:** Set the summary type to **SUM**

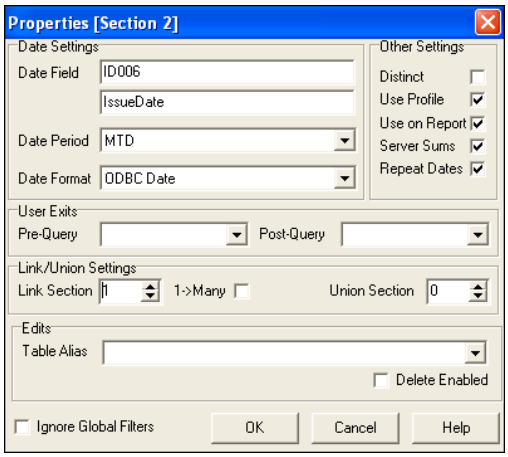
6. Enter filters into Section 1 – This is necessary so that section 1 only returns tickets that have not been refunded or exchanged.
   - **ID074 –** Refund Indicator **= 'N'**
   - **ID047 –** Exchange indicator **= 'N'**

7. Enter Global Filters – There are filters that need to apply to all sections of the report.
   - **ID007 –** Void Indicator **= 'N'**
   - **ID018 –** Vendor Type **IN ('BSP','NONBSP')**

Report 6 continued

8. Copy Section 1 by clicking on this icon . Each of the three sections in this report will contain the same query fields so you can copy this section.

9. Section Properties – The only property you need to add is the link to section 1. The other properties were copied from section 1 & will remain the same.
- Link – Link section 2 to section 1. Do this by entering a **1** in the Link by section.
- We do not want to add a checkmark in the 1>Many box this time because we're doing a one to one link.



10. Section Description – **Refunds**.

11. Query Fields – Change the name of the ID029 field to **Refund Amount**.

12. Filters – Edit the filter for the refund indicator. There are 3 refund indicators Y, P, and N (P = partial refund). We want data on any kind of refund, so we can do an IN LIST to list Y and P or we can say that we do not want N.
- **ID074** – Refund Indicator
- Edit the filter **<> 'N'.** This means, 'does not equal NO'.

13. Link – Link the Client Code field in Section 2 to the Client Code field in Section 1.
- Right-click in the Client Code field.
- Select Properties.
- Click the drop-down box next to **Link By**.
- Select **Customer Name**.
- Select OK.

Report 6 continued

Add a 3rd section for the exchange information.

1. Copy this section.

2. Change the Section description to **Exchanges**.

3. Section 3 Properties do not change since the link was created in section 2 & we copied section 2.

4. Query Field – Change the name of the ID029 field to **Exchange Amount**.

5. Filters – Edit the exchange filter to = Y for yes and edit the refund filter back to = N for no.
   - **ID047 –** Exchange Indicator
   - Enter **= 'Y'**
   - **ID074 –** Refund Indicator
   - Enter **= 'N'**

6. Link – Link the Customer Name field in Section 2 to the Customer Name field in Section 1.
   - Right-click in the Customer Name field.
   - Select Properties.
   - Click the drop-down box next to **Link By**.
   - Select **Customer Name**.
   - Select OK.

7. Save the report.

Design

Select the design icon and go to paradox 8 design.

With a one-to-one link, the design is easier to create because of the type of link it is. Unlike a one-to-many link, everything can go into one table.

1. Create a table with the Table Frame tool.

2. Define your table.
   - Sect1.db – Add all fields.
   - Sect2.db – Add Refunds
   - Sect3.db – Add Exchanges

   Make sure you use your Ctrl key since you need to add more than one field.

   To move from one section to the other, click to the right of the buttons (in the gray area). This will allow you to then select the down-arrow for your next section.

3. Select the **OK** button.

Unioning

The unioning of sections is necessary in order to add data from subsequent sections into a previous section. You will not have a Union in every report. The type of report you want to build and the results you're trying to achieve are the determining factors. In a union, Desktop Reporting takes the result set of one section and adds it to the result set of another section in order to get data from unlike sources into one result table.

For unions to work, the length and data types of each field from subsequent sections must match the length and data types of the section they're unioning into. Example:

	Field 1	**Field 2**	**Field 3**
Section 1 (Ticket)	Passenger	Issue Date	Ticket Amt
Length	20	8	14
Data Type	A	D	$
Section 2 (Car	Passenger	Issue Date	Total Car Cost
Length	20	8	14
Data Type	A	D	$

In the above example, the length and data type in Field 1 (Section 1) matches the length and data type in Field 1 (Section 2) and appears in the same order. Both Field 2s match as do Field 3s.

If an amount field in a subsequent section is not used or available, you can substitute a CAL2 field in its position. Enter a zero as the calculation.

Report 7 - Union

In this report we want to find out the total amount that a client spent on air tickets, car, and hotel. We want one total for everything. We have a function called Unioning that will do this for us.

Also, this is the first report we'll be designing in Excel.

Travel Spend Summary
ABC CORPORATION
10/1/2005 TO 10/31/2005

Customer Name	Total Spend	Air Spend	Hotel Spend	Car Spend
ACME INC	7,634.77	6,623.99	557.07	453.71
BLACK&GREEN	5,541.75	4,029.43	1221.86	290.47
CIRCLE BACK TRAVEL	8,064.80	3,991.25	3292.8	780.74
POWERTRIP	3,515.28	3,393.60	51.7	69.98
XYZ CORP	15,037.06	13,060.19	1795.94	180.93
TOTALS	**39,793.66**	**31,098.46**	**6,919.37**	**1,775.83**

1. Create a new report.

2. Name it **REPORT7**.

3. Add Report Properties
   - Title – **Travel Spend Summary**
   - Category – **Air Travel**
   - Description – **Summary of spend per client includes air, car, and hotel spend.**

Query

Section 1 will end up holding the Total Spend (air + car + hotel spend).

Section1

4. Add Section 1 Properties
   - Date Field – **ID006**
   - Date Period – **MTD**
   - Date Format – **ODBC DATE**

5. Section 1 Description – **Total Spend**

6. Section 1 – Enter these Query Fields:
   - **CL003** – Customer Name
   - **ID029** – Total Ticket Amount
     - Set summary type to **Sum**.
     - Rename the field heading to **Total Cost.**
7. Section 1 Filters – We only want airline tickets and we don't want any voids.

Query – Section 2

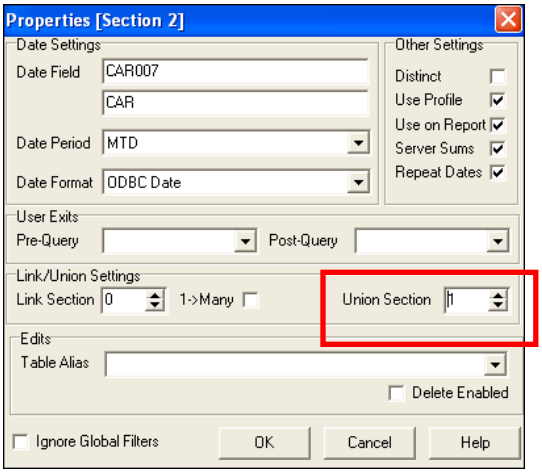
Section 2 will hold the air spend on its own.

8. Copy Section 1
9. Change the Description to **Air Spend.**
10. Change the data field heading for ID029 to **Air Spend**.
    - We do NOT need to union this section back to section 1 since the Air spend is already included in Section 1.

Report 7 continued

Query – Section 3
This section holds the hotel spend.

11. Add Section 3 Properties:
- Date Field: **HTL007**
- Date Period: **MTD**
- Date Format: **ODBC Date**
- Union – Enter a 1 in the Union Section. We're unioning section 3 with section 1 in order to add the hotel spend to the air spend per customer.



Section 3 Description – **Hotel Spend**

12. Section 3 Query Fields:
- **CL003** – Customer Name
- **HTL035** – Hotel Cost. Sum it.

13. Section 3 Filters:
- HTL008 (Hotel Void Indicator)
- **= 'N'**

Query – Section 4
This section holds the car spend.

14. Add another section.

15. Enter section 4 Properties:
- Date Field – **CAR007** (Hotel Issue Date)
- Date Period – **MTD**
- Date Format – **ODBC Date**
- Union – **Union** section 4 to section 1 by adding a **1** in the union box.

16. Enter Section 4 description: **Car Spend**

17. Enter Section 4 Query Fields:
- **CL003** – Customer Name
- **CAR028** – Car Spend. Sum it.

18. Section 4 Filters:
- **CAR008** (Car Void Indicator)
- **= 'N'**

19. Save and run with your **ABC Corp** profile.

20. Close Excel.

Report 7 continued

21. From the query page, select the **Report Design** button. This will put you in the Edit Design mode.

NOTE: If changes are made to the design when 'Run' or 'Run with' are selected, then the changes will not be saved. You need to be in the Edit design mode.

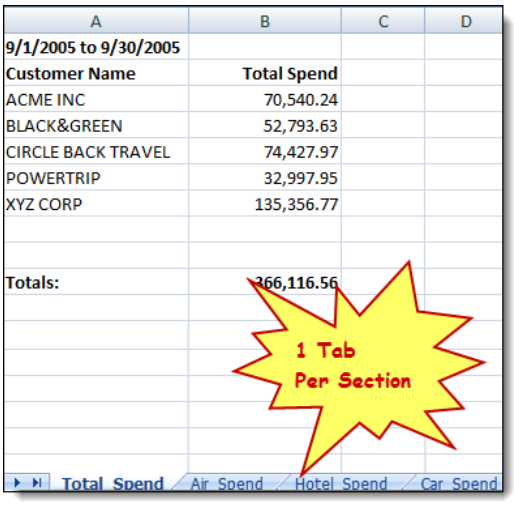
22. Below is the outline of an Excel Design.

Excel Design Overview

Selecting Excel as the design tool for your report is different than having Desktop Reporting do an Excel data dump.

When a report is created and no design tool is selected, TRAVELTRAX Desktop Reporting defaults to an Excel data dump (Excel raw data). There is no design to the report, but the results of the query will display in Excel. There will be one tab for every section in the query.

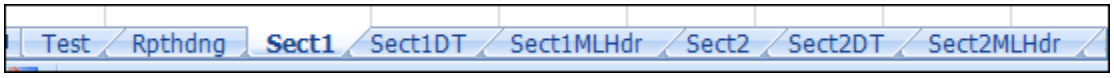
Below is an example of a data dump with 4 sections in the query; one tab/sheet per section.



Explanation of tabs for Excel Design

When you select Excel as the design tool, you will see one tab for each section of the report, one tab for the dates of each section of the report, and one tab for each section for a Multilanguage header (not currently in use for most clients). You will also see a tab for the profile information (Rpthdng)

Below is an example of the tabs of a report and an explanation of each:



Test – This is the name of the report. This tab contains no data.

Report 7 continued

Rpthdng – This tab contains the data that comes from the profile. It contains the Profile ID, any headers that were entered into the profile, the report name, and any remarks that were entered in the profile. This data can be moved to the main sheet for the report to create a header for the report.

A	B	C	D	E	F	G	H
PROFILE ID	REPORT HEADER 1	REPORT HEADER 2	REPORT HEADER 3	REPORT TITLE	REPORT NAME	REMARK LINE 1	REMARK LINE 2
XYZ Company	TRX	XYZ Corporation		Untitled	Test		

Sect – Each section of a report will have its own tab in the Excel design that contains the data results from the query. So, if we have 3 sections, we'll have Sect1, Sect2, and Sect3 tabs in the design.

A	B	C
Client Code	Total Ticket Amount	
0L00854	$30,134.54	
0L00856	$24,898.11	
5R06200	$16,334.90	
6802822	$32,237.65	
B206601	$11,656.44	

Sect1dt – Each section of a report will have its own tab in the Excel design that contains the date information. If we have 3 sections, we'll have Sect1dt, Sect2dt, and Sect3dt tabs.

A	B	C
BEG DATE	END DATE	DATE RANGE
11/1/2007	11/30/2007	11/1/2007 TO 11/30/2007

Sect1MLHdr – Each section of a report will have its own tab in the Excel design that contains any multi-language header information. If we have 3 sections in the query, then the design will have Sect1MLHdr, Sect2MLHdr, and Sect3MLHdr.

Report 7 continued

Detach Excel Design

You could design the entire report while attached to the TTX Desktop Reporting application, but we always detach the design from the tool so we can create multiple versions of the design if necessary. With Excel, if you create VBA and you make a mistake, you'll probably lose the entire design and have to start over. However, if you detach the design from our tool and you keep doing a Save As to save multiple versions of the design every time you create new VBA code, then you won't lose all your work.

1. Close out of Excel. When you run a report, a temp file of that report is stored in a temp folder.

2. Access the temp file from **C:\Windows\Temp\TMANPRIV.**

3. Copy the Excel file to your desktop (In real life, you can copy this file anywhere you want so you can work on it. You'll be deleting this file later.)

4. Open the Excel file from that location.

Design

For this first report, we're going to manually create the design instead of using VBA. This is certainly not the most efficient way to create the design, but it will give you an idea of what usually needs to be done when you create an Excel design for your report.

5. Create a new sheet after the last tab and rename it **Report**. This is where you're going to put the final design for your report.

6. Format this tab so you can add a header. Normally we add the report title, the profile name and that date range(s) in the header. The report title and profile name can be found in the Rpthdng tab and the dates can be found in each SectDT tab.
    - Select A1 through E1
    - Merge & Center
    - Arial, 14, Bold
    - Select A2 through E2
    - Merge & Center
    - Arial, 12, Bold
    - Select A3 through E3
    - Merge & Center
    - Arial 11

Report 7 continued

7. Reference the data you'll need for your headers.
    - In A1 through E1, type =
    - Select the Rpthdng tab
    - Select the Report title (cell 2E) and Enter
    - In A2 through E2, type =
    - Select the Rpthdng tab
    - Select the profile name (2C) and Enter
    - In A3 through E3, type =
    - Select the Sect1DT tab
    - Select the date range (2C) and Enter

8. Type in the column headers that you'll need and format them
    - You need **Client**, **Total Spend**, **Air Spend**, **Hotel Spend**, and **Car Spend**.

9. You need add the data from section 1. This is your main section.
    - In cell 6A, type **=**
    - Select **Sect1**
    - Select the first line of data (2A) and enter.
    - Fill over to the right one column
    - Fill down about 20 rows. It will have the same data in each cell until you auto calculate.
    - Hit your **F9** key on your keypad to auto-calculate.
    - You can then delete all the lines rows you don't need.

10. To get your Air, Hotel, and Car Spend, you'll have to find the corresponding data for each client so you'll have to create a VLOOKUP.
    - **=VLOOKUP($A6,Sect2!$A$1:$B$6,2,FALSE)**
    - Fill down that column and auto-calculate (F9)
    - Repeat these steps for the hotel and the car spend. Just make sure to change the VLOOKUP so it references the correct section.

11. Add Totals
    - Add totals below each column.

12. If you have VBA in your design, you always have to make sure the report is kept in its pre-processed form (the macro has not run and all sheets are visible). This does not apply to this report since we didn't use VBA.

13. Save your report and exit out of Excel.

Report 7 continued

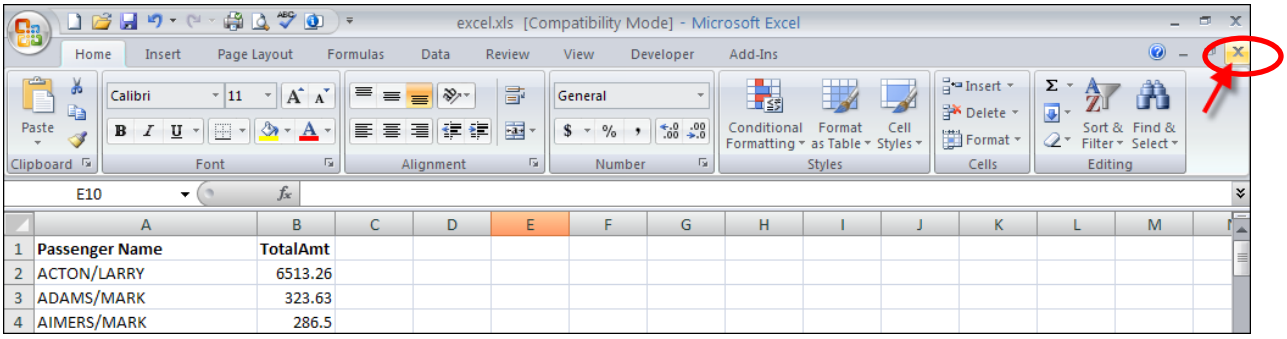
Re-attach Excel Design

Since you created (or changed) the design outside the TTX Desktop Reporting tool, you'll need to re-attach your design to the tool. Follow the steps below to re-attach an Excel design:

14. Open Report 7 in TTX Desktop Reporting.

15. Select **Edit Design** from the main menu or click on the **Report Design** button if you opened the report and are on the query page (you have to be in the edit design mode). Use the ABC Corp profile and the default dates.

16. When the report displays, close the workbook but **NOT** Excel (click the lower X in the upper-right corner).



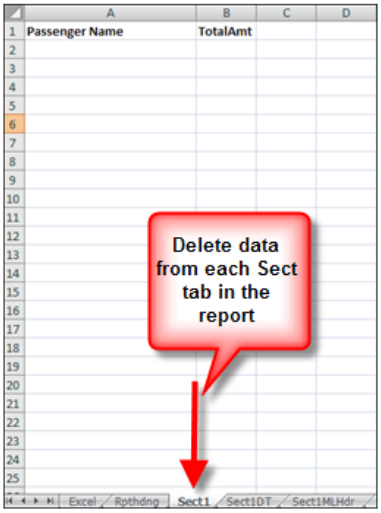
17. Select **File – Open** and browse to the folder containing your modified Excel design.

NOTE: **Do not** open the document outside of Excel
Do not go to Recent documents to open the Excel file.

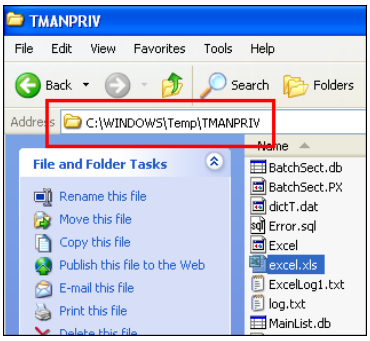
You need to do File-Open so you have the ability to open the report, activate the macros, but not run them (how you do that depends on what version of Excel you have).

18. Select your Excel report.

19. Prevent any macros from running and clear most, or all, data from each Section tab.



Report 7 continued



20. **Save As** and save the report to **C:\WINDOWS\Temp\TMANPRIV**.

21. Instead of entering a name, select your original report and choose to overwrite when prompted.

22. Close Excel. This has reattached you design to TTX DR. The report with all your changes is now saved to the database.

23. To verify this, go back into TRAVELTRAX Desktop Reporting and run the report.

Report 8

In this report, you'll learn how to create an Excel design using VBA code within Excel. You will learn basic concepts of VBA code and you'll learn how to apply those basic concepts to different report designs.

Executive Summary
ABC CORPORATION
Current: 01-SEP-2005 TO 30-SEP-2005
Prior: 01-AUG-2005 TO 31-AUG-2005

EXCEL 1 Report Run Date: 22-SEP-2012

	Current	Prior
Air Spend Total	285,718	276,045
Num Tickets	420	406
Avg Spend	680	680
Full Fare	726,784	676,079
Low Fare	240,298	231,699

Query

You're going to start looking at a report yourself to determine what fields are needed, whether the report is a summary report or a detailed report, how many sections are needed, and what data fields you need to put into each section.

Look at the report above to enter the information needed to create this report.

1. Create a new report and name it **REPORT8**

2. Add the Report Properties
   - Enter **Executive Summary** as the report title.
   - Select a category that makes sense to you.
   - Enter a description based on the report you see above.

3. Add the Section Properties
   - **IssueDate**
   - **Months' worth of data for the current month**

4. Enter a section description
   - You need to start thinking about what you'd want to see if someone else was creating this report.
   - Enter a description of the data that will be entered into this section. You should already know what data you'll enter into this section before you get started.

Report 8 continued

5. Enter the data fields and filters necessary to create the report you see on the screen in class. Enter the data field numbers below for the following:

   - Air Spend _____
   - Number of Tickets _____
   - Full Fare _____
   - Low Fare _____

6. Add Filters – Using filter assist, add the filters we normally add for ticket data. Enter the data fields needed and the SQL for the filter.

   - _____ _____
   - _____ _____

Design

7. Select **Excel** as the design tool (when it asks you to run the report, run it with the default dates and use the ABC Corp profile).

8. Close out of Excel and you'll be taken back to the query.

9. Access the Temp folder: C:Windows\Temp\TMANPRIV

10. Copy the Report8 Excel file and copy it to your desktop.

11. Open Report8 from your desktop. Now you're ready to create the Excel design.

12. Determine what you'll need for the report header. List what you think/know your company wants in your report header.
    - _____
    - _____
    - _____
    - _____
    - _____

- _____
- _____

Report 8 continued

13. Determine what columns/rows you'll need and add the column/row headers.

- Since the column/row headers are static, you can just type them in.
- You will need to format the text (font size, font type).
- Add borders if necessary.

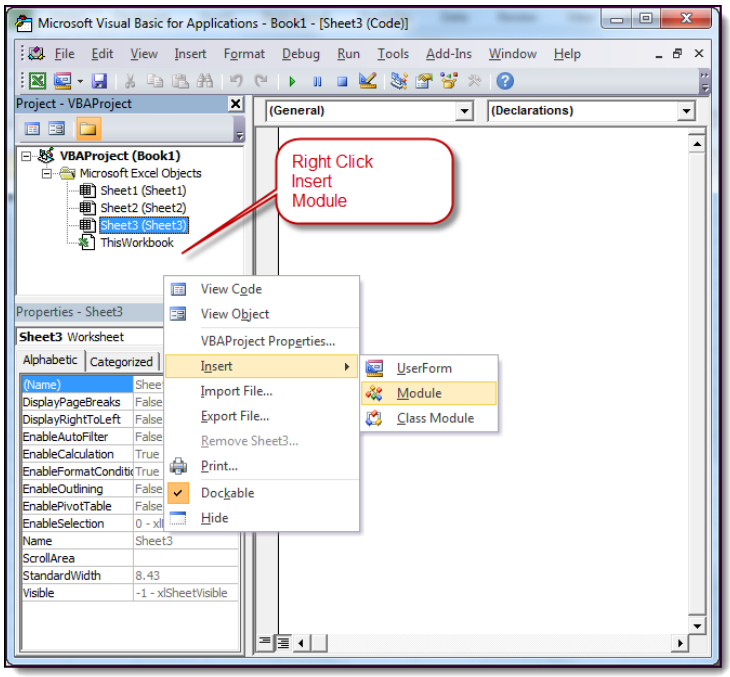
14. Think about the other things you'll need to do to get the data from both sections into the Report sheet. Write them below:

15. Access VBA code using one of the following options:

- Right click any sheet and **View Code**.
- 2003: **Tools – Macros**
- 2007: **Developer – Visual Basics** (in the code section)

16. Insert a module – You can separate your code into different modules if you want to.

- In the top, left box under VBAProejct, right click and select **Insert – Module**.

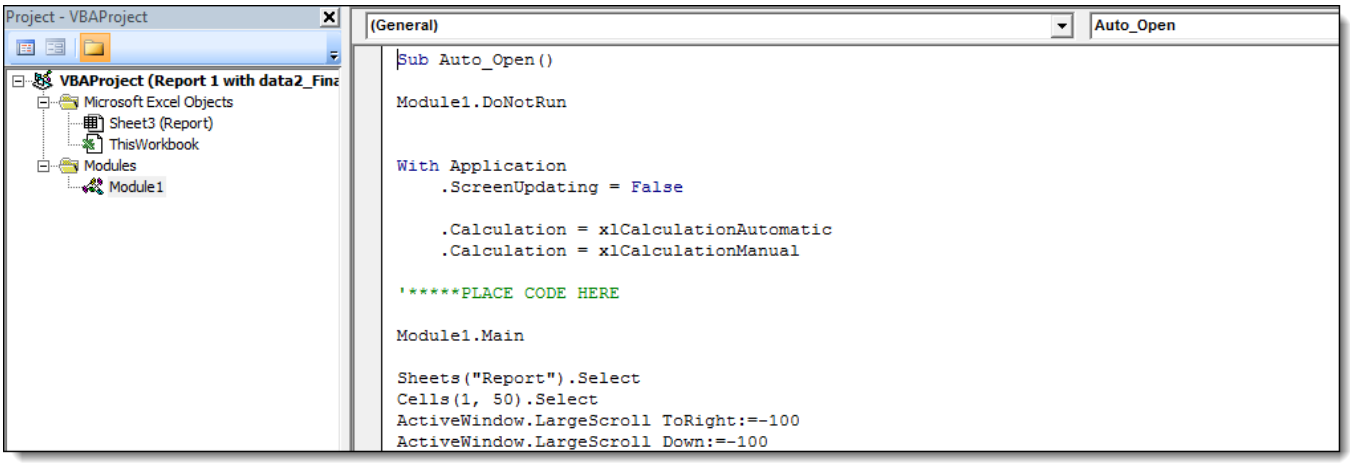


Report 8 continued

17. Create a sub routine.

- Sub *Name*() – Type the word Sub then type in the name of the sub routine. You can name the sub routine anything you want. You'll have to refer to this name later in the code. Example: **Sub DoNotRun()**

- The trainer will give you the VBA code for this report. Copy & paste it into this module.



Report 9

This is a report to show the Airline Spend for Month to Date and Year to Date. We will select Excel as the design tool.

We're going through all the steps a report developer would normally take when creating an Excel design. We hit on them briefly in the last report, but we'll go into those steps more in depth during this report.

Query

24. Create a new report called **REPORT9**.

25. Report Properties
    - Title **Air Spend Comparison**
    - Category **Air Travel Summary**
    - Description **Ticket Summary Comparison MTD & YTD**

26. Section Properties
    - Date Field **ID006**
    - Date Period **MTD**
    - Date Format **ODBC Date**

27. Section Description **Ticket Summary MTD**

28. Query Fields
    - **ID021**
    - **ID045** (Sum)
    - **ID029** (Sum)
    - **Rank – Top 25 Airlines by TotalAmt**

29. Add Filters
    - **ID007 = 'N'**
    - **ID018 IN ('BSP','NONBSP')**

30. Add a new section

31. Section Properties
    - Change Date Period to **YTD**

32. Section Description **Ticket Summary YTD**

33. Add Query Fields (You will not rank the data in this section)
    - **ID021**
    - **ID045** (Sum)
    - **ID029** (Sum)

34. Run the report and use the default reporting periods.
    - This is a data dump and will only display 2 tabs: one for each section.

Report 9 continued

35. Close Excel.

36. From the Query page, select the **Report Design** button (or **Tools – Report Design**) and select **Excel** as the design tool. This is the Edit Design Mode.
    - When you select Excel as the design tool, Desktop Reporting forces you to run the report, so select the default dates and the ABC Corp profile.

Design

When doing an Excel design using VBA, you may need to create many copies of the design just in case some of the code doesn't work. These are the steps to follow to copy the report design to a location on your computer that is outside of the TTX Desktop Reporting tool.

37. Close Excel again. This will bring you back to the Query page.

38. Go to the temp folder and copy report9: **C:\Windows\Temp\TMANPRIV**
    - Right click on the **Report9** and **Copy**.

39. Paste it on your Desktop (remember that you can paste your file anywhere you want…we're just pasting them to the desktop in class).

40. Open the Excel file for this report from your desktop. Now the design is detached and you can create as many copies as you need.
    - If you're using VBA, create a new copy of the report for every piece of VBA you create. That way, you can always take a step back if the VBA code doesn't work and you won't have lost any of your previous work.

41. Select the first sheet and rename it **Main**.
    - We usually start out the design in this sheet and then copy it to the **REPORT** tab that we'll create. When you do this, the formulas you create won't display to the users.

42. Select cell A2 in the Main sheet and reference the first airline from Section 1 of this report
    - Type =
    - Select the Sect1 sheet
    - Select cell A2
    - Enter

43. Select cell B2 in the Main sheet and reference the Bookings for that first airline.
    - Type =
    - Select the Sect1 sheet
    - Select cell B2
    - Enter

44. Select cell B2 in the Main sheet and reference the amount for that first airline.
    - Type =
    - Select the Sect1 sheet
    - Select cell C2
    - Enter

Report 9 continued

45. Select cell D2 in the Main sheet and reference the bookings from Sect2 for that first airline (you'll have to find the airline name to get the cell reference).
    - Type =
    - Select the Sect2 sheet
    - Select cell B(line nbr that the airline is on)
    - Enter

46. Select cell E2 in the Main sheet and reference the bookings from Sect2 for that first airline (you'll have to find the airline name to get the cell reference).
    - Type =
    - Select the Sect2 sheet
    - Select cell C(line nbr that the airline is on)
    - Enter

47. Create a new sheet after all other sheets and name it **REPORT**.
    - This is where we always move our final design for our report.

48. Add formatting for the report header: We'll merge & center and change the font style & size for the header. The header will include the Report Title, the Profile used and the dates you ran the report for.
    - Select A1 through D1
    - Merge & Center
    - Arial, 14, Bold
    - Select A2 through D2
    - Merge & Center
    - Arial, 12, Bold
    - Select A3 through D3
    - Merge & Center
    - Arial 11
    - Select A4 through D4
    - Merge & Center
    - Arial 11

49. **Create Date Headers** for MTD and YTD
    - Select Cells 5B & C
    - Merge & Center
    - Type MTD
    - Arial 11 Bold
    - Select Cells 5E & F
    - Merge & Center
    - Type YTD
    - Arial 11 Bold

50. **Create column headers**: Type in the column headers that you'll need and format them.
    - Cell 6A – Add Airline
    - Cell 6B – Add Bookings
    - Cell 6C – Add Air Spend
    - Cell 6E – Add Bookings
    - Cell 6F – Add Air Spend

Report 9 continued

51. **Create VBA code** – Right click any tab/sheet at the bottom of the page and select **View Code** (you can also click on your *Developer* tab at the top of the page and select *Visual Basic* in the Code section).

52. In the left column under VBAProject, right-click and **Insert** – **Module**. This is where you'll enter your VBA code.
    - In class, we're going to give you some code that you'll be able to copy and paste into this module. We'll also send the file to you so you can use later.

53. Paste the VBA code given to you into this module.

    - **Auto Open** – This subroutine will prevent the report from running when the user first opens it. It will then find the last data row in Sect1. Then it will fill down in the Main sheet and turn on the Auto Calculation to paste the data from Sect1.

    - **Copy Paste Data** – This subroutine will copy the data from the Main sheet and paste it into the Report sheet starting at row 8, column A (or 1).

    - **Header Add** – This subroutine will enter the report title, name, the YTD dates and the MTD dates and the report Name.

    - **DelSheets** – This subroutine will delete all sheets/tabs except for the last one. This is why we put our final design in the last sheet. You also have the option to hide sheets instead of deleting them, but we're deleting them in our example.

54. Before you run through the VBA to make sure it works, make a copy of the report (Save As). This way you'll have a copy of the report with all the VBA code, but it will be in its pre-processed form, which is what you'll need later.

55. In the newest version, step through the VBA code to make sure it works.
    - To do this, pull up the code (right-click one of the sheets and View Code), double click on the word Module.
    - Minimize Excel and the VBA so you can see both on your screen at the same time.
    - **F8** Key – We're going to walk through the code to see what it does. The cursor should be before Sub Auto_Open. If not, put the cursor there and click on the F8 key on your keyboard. This will walk through the code line by line.

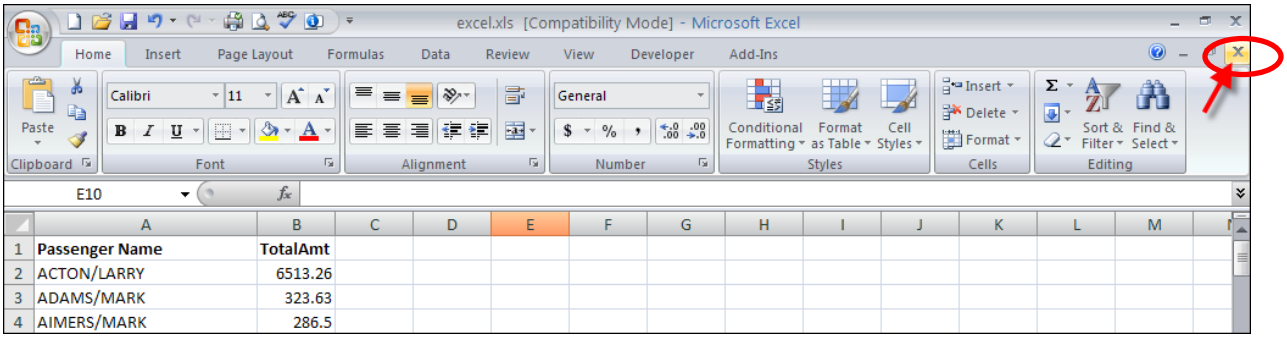
56. Once you've determined that the code is correct and it does what you want it to do, then copy the code, pull up the previous version of the report design and paste the code into that. We have to do that because we need a version of this report that is in its pre-processed form (the macro has not run and all sheets are visible).
    - When you pull up the previous version of the report, you have to browse to pull it up. You cannot pull up a copy by going to Recent Documents. Access your libraries/my computer and find the document from there.
    - Click on the previous version of the report, hold down your shift key on your keyboard and then click Open.
    - It will ask you to enable or disable macros. Hold down your shift key again and click on Enable macros. This will allow you to pull up the document and enable the macros without the macros actually running.
    - Pull up the VBA code, and paste in the entire code that you copied.
    - Click **Save** and remember that this is your final report design.

- Close out of Excel

Report 9 continued

57. Go back to Desktop Reporting, and go to this report and **Edit Design** (Design Report).

58. When the report displays, close the workbook but **NOT** Excel (click the lower X in the upper-right corner).



59. Select **File – Open** and browse to the folder containing your modified Excel design.

60. Select your Excel report.

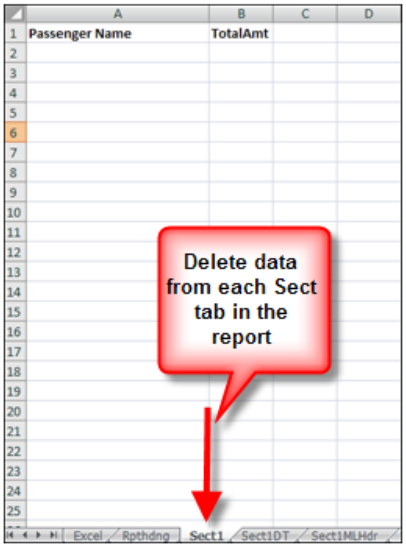
61. Prevent any macros from running and clear most, or all, data from each Section tab.

62. **Save As** and save the report to **C:\WINDOWS\Temp\TMANPRIV**.

63. Instead of entering a name, select your original report and choose to overwrite when prompted.

64. Close Excel. The report with all your changes is now saved to the database.

65. To verify this, go back into TRAVELTRAX Desktop Reporting and run the report.



Batch Generator

The Batch Generator is where you setup which profiles and associated reports you want to generate. It provides the means to produce one to hundreds of unattended reports in several formats.

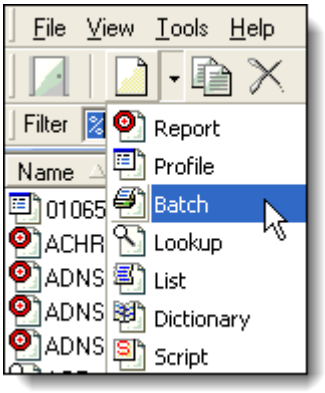
You can elect to output all or any combination of your reports in any combination of the following ways:

Report Output	Standard output.
▪ Printer	Send to any available printer.
▪ Screen	Send to your computer monitor.
▪ E-Mail	Electronic transmission of PDF file with MailMan installed.
▪ Compress using ZIP	Compresses the PDF file(s) into a single zip file.
Text Output	Raw text data output.
▪ Delimited	Data elements separated by a common text element [e.g. comma].
▪ Fixed Length	Data elements are located in a fixed position on each row.
▪ E-Mail	Electronic transmission of text file.
▪ Compress using ZIP	Compresses the text file(s) into a single zip file.
Spreadsheet Output	For use with Microsoft Excel.
▪ E-Mail	Electronic transmission of Excel file.
▪ Compress using ZIP	Compresses the Excel file(s) into a single zip file.

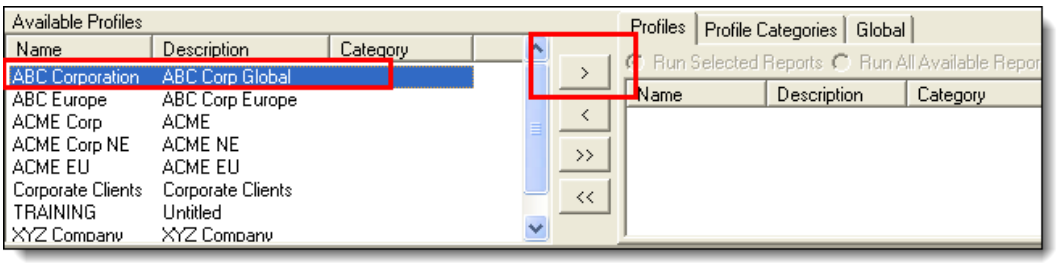
Create a Batch Exercise

In this exercise you will learn how to create a new batch from which you can run existing reports. Later, this same batch will be used to generate the reports you will build in class.

1. Select the **New** icon and then select **Batch** from the drop-down list.

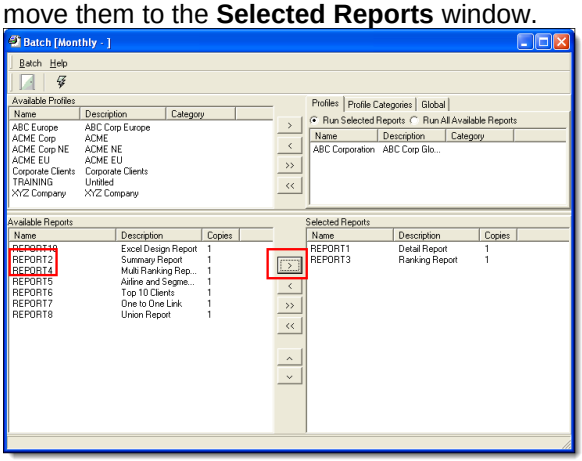


2. When the New Batch window appears, type **MONTHLY** then select **OK**.
3. Select **ABC Corporation** from Available Profiles.
4. Click on the right arrow to move **ABC Corporation** to the upper right window.



5. Select the **ABC Corporation** profile in the upper right window to bring up a list of all available reports assigned to that profile.

6. Select two of the reports that are in the Available Reports window and click on the right arrow to move them to the **Selected Reports** window.



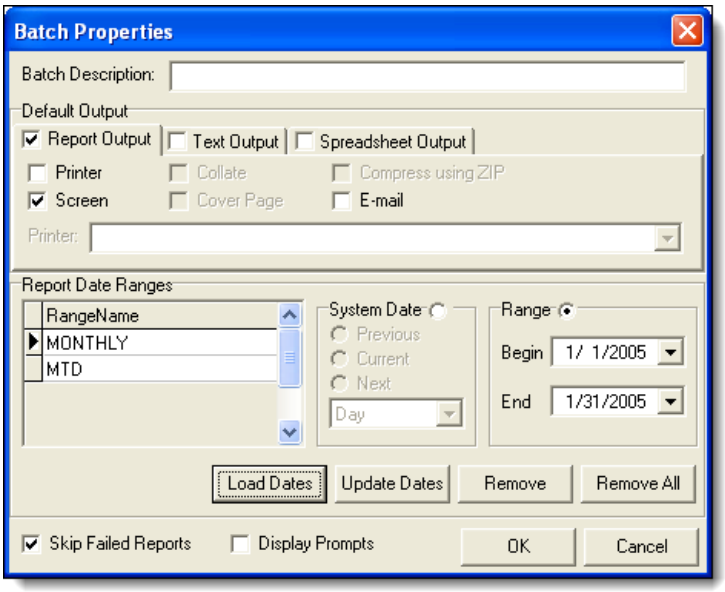
Batch Generator Exercise continued

7. From the main batch window, select **Batch**, then **Properties**.

8. Select the **Load Dates** button to bring up a list of the Reporting Period labels for all reports in your batch.

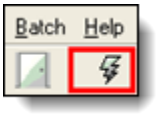
9. If required, edit the **Begin Date** and **End Date**. (In class, leave the default dates.)

10. Click the **Skip Failed Reports** check box. If this is unchecked, no report after the failed report will run.



11. Click **OK**.

12. To run the reports in the batch, select the **Run Batch** icon (looks like a lightning bolt).



Prompts

This section will show you how to create prompts in a report. To give a user the ability to select specific data within a data field, you can create a prompt that allows them to enter the data or to choose the data from a list. Below are the different types of prompts that you can create along with an example and an explanation.

- When you enter a prompt into the data fields, it is mandatory for the user to select/add a value.
- When you enter a prompt into the filter section, it is not mandatory. The user has the option to override the prompt and still return all data for that specific data field.
- The prompt string cannot exceed 30 characters. This means that the length of the text you add cannot be more than 30 characters long. In the first example below, the text is **Airline Code**.

Regular Prompts

This type of prompt will display when the user runs the report.

='~{Airline Code}'

The format is explained as:

Equals sign, single quote, tilde, left French brace , the words you want to display for the prompt (in this example it is Airline Code)*, right French brace, single quote.*

The equals prompt above will display the name of the prompt (in this example Airline Code) and allow the user to enter one specific data field.

IN (~{Airline Code})

The format is:

The word IN, open parenthesis, single quote, tilde, left French brace, the words you want to display for the prompt, right French brace, single quote, close parenthesis.

The In List prompt above will display the name of the prompt (in this example, Airline Code) and allow the user to enter multiple, specific data fields.

Default Prompt

Default prompts will display the name of the prompt AND display a default value for that prompt. The user has the option to leave the default value or change it if necessary.

= '~{Airline Code},AA}'

This format is:

Equals, single quote, tilde, left french brace, prompt name, right french brace, a comma, the default value, right French brace, single quote.

The example above will give the user a prompt that has a default value of AA. They can change this value or leave the default value. This prompt will not allow a blank value, thus returning ALL values.

Pick List Prompt

A Pick List prompt will display a list of values that the user can select from. This option allows the user to pick from the list or enter a value(s) manually. The list has to be created before doing the steps below.

- In the filter section, click and drag the data field that holds the value needed.
- Right-click in that column and select **Pick List.**

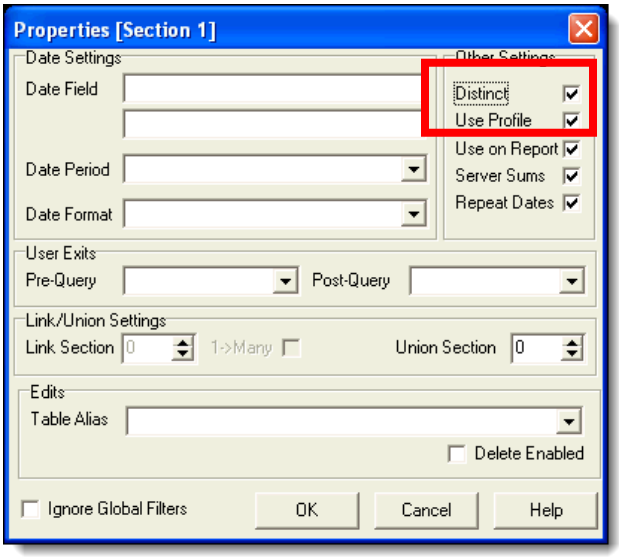
- Select **List Object** and the pick list box will activate.
- Select the list you need from the options that display.
- Click **OK**.
- Right-click the filter and select **Edit Filter**.
- Enter the SQL that will give you the prompt you want.

Pick List report:

A Pick List report is a separate report you create to run a query and return data that will then be used to display a list that the user can select from. The advantage of using this is that it will only allow the user to select from a list of values that currently have data.

Create Pick List Report

- Create a new report.
- Name it using a naming convention that will let everyone know this is a pick list report.
- Access the section properties and select **Distinct**. This will only show each value once.



- Select the data field that will return the value you need for the list (you can add multiple values in this one Pick List report).
- Enter any filters necessary.
- Save the report.

Create a Pick List from a Pick List Report

- Click and drag the data field you need for the list into the filter section.
- Right-click that data field and select **Pick List**.
- Select **DART report** and click **OK**. A list of all your reports will display.
- Select the correct pick list report.
- Then select the **Return Value From** field you need (the data field entered into the pick list report.
- Click **OK**.

Char Index Prompt

The CHARINDEX function is used to search a character string for a specific character or set of characters. If the character string being searched contains the characters being searched for, then this function returns a non-zero integer value. This integer value is the starting location of where the character string being searched for is located within the string being searched.

CHARINDEX (expression1 , expression2 [, start_location])

Where ***expression1*** is the string of characters to be found in ***expression2***, and ***start_location*** is the position where the CHARINDEX function will start looking for expression1 in expression2. ***start_location*** is an optional field. If you don't specify a start location or if you specify 0 or negative number, the search starts from beginning of *expression2*.

Here is an example of a charindex: **CHARINDEX('~{Airline Code1}',[ID020])*[ID029]**

CHARINDEX	the statement expression
{'~{Prompt Name}'	A prompt will display for the user to add the value they want to search for. In the example above, the user will enter an airline code and the query will search for that airline code in the ID020 data field.
,[ID020]	This is expression 2 of a charindex statement – The query will look in this data field, ID020, for the value that has been added in the prompt.
***[ID029]**	In this example, every time the query finds each airline code the user added in the prompt, it will return a value of 1. Then it will multiply 1 times ID029 which is the ticket amount. This will give us ticket amounts for specific airlines only. If the airline code chosen in the prompt is not in the data, it will return a 0 (zero) and when it multiplies 0 x ticket amount, it will return 0 as the result.

SQL Statements

SQL is used when creating calculations and filters. This section will show you the most common SQL statements used in reports.

ISNULL

The ISNULL function is used to replace NULL values with another value. Here is an example of an ISNULL statement:

ISNULL([ID021],'Unknown')

ISNULL	SQL expression
([ID021]	The data field to check for Null values (ID021
,'Unknown')	The replacement value for any results that are returned with a Null value.

IN ('BSP','NONBSP')

This SQL statement is used to select air and rail as the only vendor types returned in a report. BSP and NONBSP are vendor types that will return air and rail tickets that were issued through ARC, BSP, or were consolidator tickets.

IN	SQL Expression to start an IN-List. Use this when you have more than one value.
('BSP'	Open parenthesis, single quote, value, single quote.
,'NONBSP')	Comma to separate each value, single quote, value, single quote, close parenthesis.

Month

This SQL statement is used to show the first three letters a month. It is used when you only want to see the abbreviation of a month instead of the full issue date.

Calc 4
SUBSTRING(CONVERT(CHAR(12),DATENAME(MONTH[ID006])),1,3)

Year

This SQL statement is used to show the two digit year.

Calc 2
YEAR([ID006])

Month and Year

Calc 4
substring(convert(char(12),datename(month,[ID006])),1,3)+'-
'+substring(convert(varchar(4),year([ID006])),3,2)

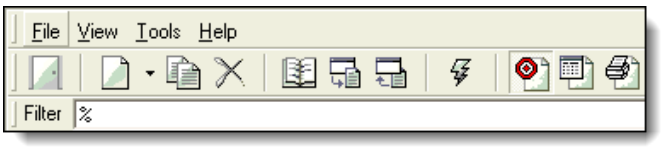
Customization

Within the Desktop Reporting tool, each company is able to customize certain things. They can create custom calculation fields, their own reporting periods, their own filters for filter assist, and their own lookups based on their individual needs. Below are some of the things within Desktop Reporting that they can customize.

Calculations

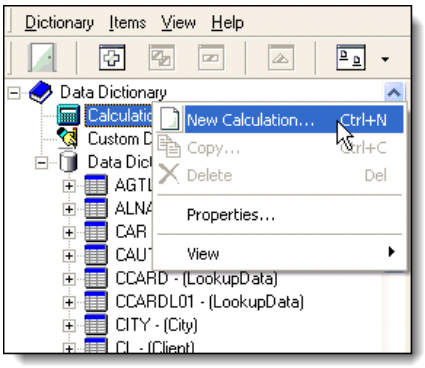
To create a calculation that will be saved in the Data Dictionary:

8. Click on the **Data Dictionary** icon.



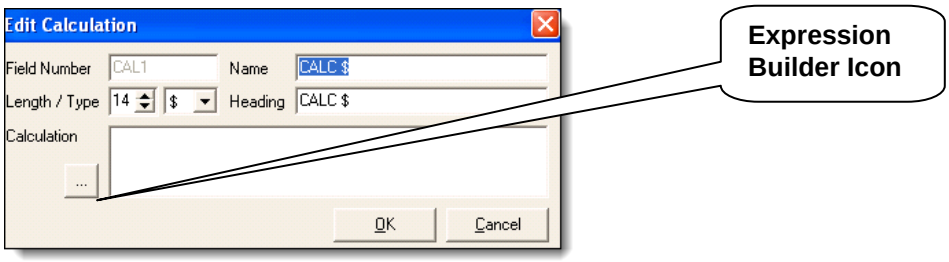
9. In the left column under Data Dictionary, click on **Calculations**.

10. Then, right-click on **Calculations** and select **New Calculations**.



11. Complete the New Calculation window.

- Field number – Default is the next number available but can be changed to anything you want. It has to start with **CAL**.
- Field name – Name the field so people know what data will be returned.
- Field heading – Enter the heading you want displayed for this data field.
- Type – select the type of field this will be (see User Guide for type descriptions).
- Length – Enter the maximum length you want for this field.
- Calculation – Enter the calculation by typing it in the box or clicking on the button to open the Expression Builder window.

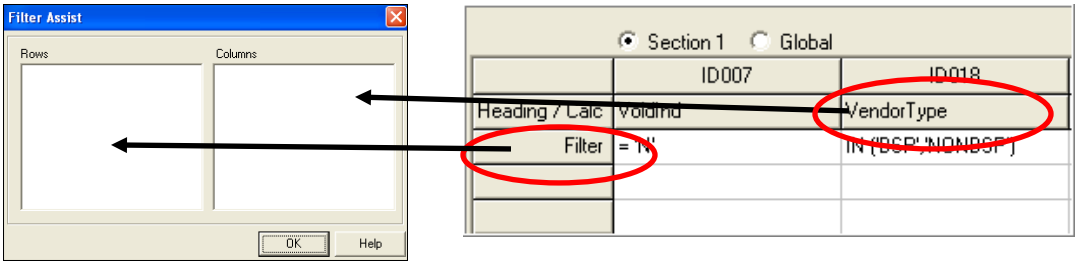


Filter Assist

If you use the same filters over and over again in reports, you may want to put them into the Filter Assist so you don't have to create them for each report.

1. You have to add the filters to your query page and enter the SQL statements.

2. Click on the Filter Assist button . It will display the box on the left, below.

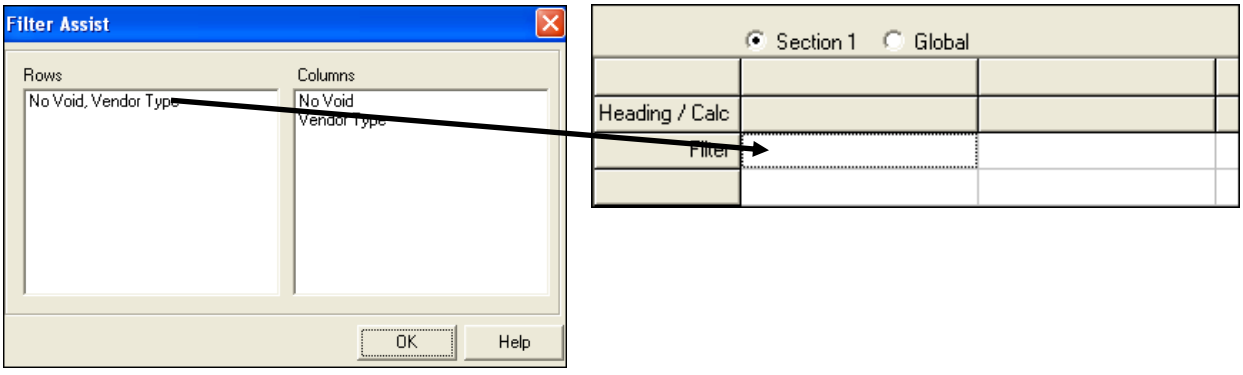


3. To enter an entire row of filters (if you want to add multiple filters at one time) click at the beginning of the row where you see the word 'Filter' and you drag that into the left box called **Rows**.

4. To enter each filter separately, click on the name of the data field and drag it into the Columns box. The filters are then ready to use.

To Use the filters in Filter Assist

Once the filters are in Filter Assist, they can be used by anyone in that particular company that has access to TRAVELTRAX Desktop Reporting. To enter a filter that exists in Filter Assist, click on the filter (or row of filters) you need to add and drag & drop it into the filter field.



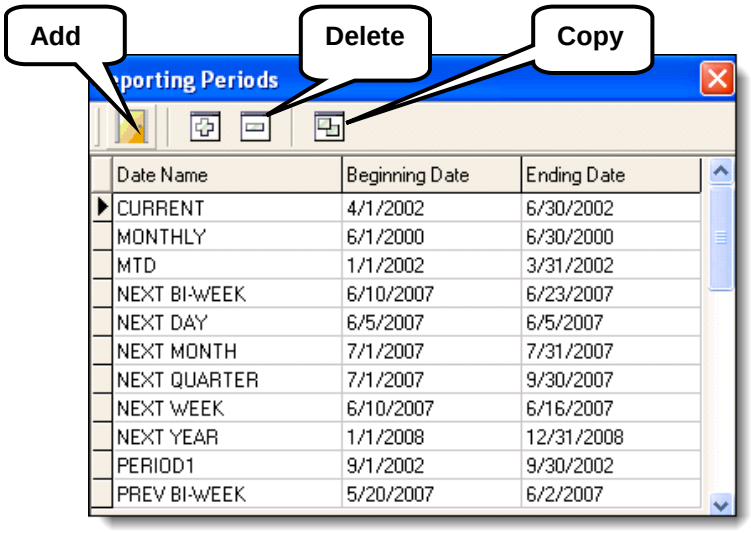
Reporting Periods

This screen contains the master Reporting Periods for TRAVELTRAX. Batch Generator uses these reporting periods when you generate reports.

Add Reporting Period

Follow the instructions below to add a reporting period

1. Click on ***Tools.***
2. Select ***Reporting Periods.***
3. Select the ***Add icon.***
4. Enter the ***Date Name.***
5. Enter the ***Beginning Date*** and ***Ending Date*.**



Date Name	Beginning Date	Ending Date
CURRENT	4/1/2002	6/30/2002
MONTHLY	6/1/2000	6/30/2000
MTD	1/1/2002	3/31/2002
NEXT BI-WEEK	6/10/2007	6/23/2007
NEXT DAY	6/5/2007	6/5/2007
NEXT MONTH	7/1/2007	7/31/2007
NEXT QUARTER	7/1/2007	9/30/2007
NEXT WEEK	6/10/2007	6/16/2007
NEXT YEAR	1/1/2008	12/31/2008
PERIOD1	9/1/2002	9/30/2002
PREV BI-WEEK	5/20/2007	6/2/2007

Delete Reporting Period

If a report period is no longer needed, it can be deleted from the list.

1. Click on ***Tools***.
2. Select ***Reporting Periods***.
3. Select the reporting period to delete.
4. Select the ***Delete*** icon.

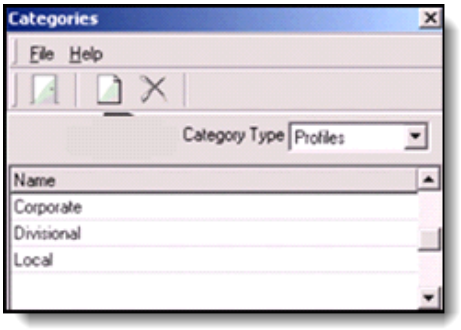
NOTE: If you delete the reporting period any report that contains that reporting period will not have default dates set. It would be a good idea to find all the reports that use a reporting period and change them in the report before you delete the reporting period from this list.

Category Editor

Use this screen to add, copy, or delete categories. You can create categories for both Profiles and Reports. Select Profiles or Reports from the Category Type drop-down list before you add, copy, or delete a category.

Add a Category

1. Select ***Tools***.
2. Select ***Category Editor***.
3. Select the Category Type (Profiles or Reports).
4. Select the ***New*** icon.
5. Enter the category name.
6. Select ***OK***.
7. Select ***File – Save***.
8. Select the ***Exit*** icon.



Delete a Category

1. Select ***Tools***.
2. Select ***Category Editor***.
3. Select the Category Type (Profiles or Reports).
4. Select the category to delete.
5. Select the Delete icon.
6. Select ***OK***.
7. Select ***File – Save***.
8. Select the ***Exit*** icon.

NOTE: Before you delete a category, find all the reports or profiles assigned to that category, change them to the correct category first and then delete the category that you no longer need. If you delete a category and reports or profiles are still assigned to that category, those reports or profiles will no longer display on the Web Reporting site.

Lookups

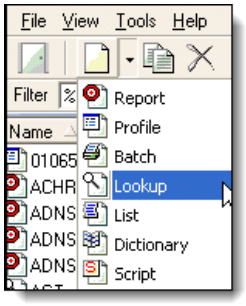
The Lookup option allows you to build a new field based on an existing field in the Data Dictionary. One reason to do this is to provide meaning to coded fields within your database.

For example, the Domestic/International field could have the following codes: **D, I, T**, and **F**. If you want to see the words Domestic and International instead of the codes, you would build a Lookup. The code **D** would be set up to be Domestic and the codes **I, T,** and **F** would be set up to be International.

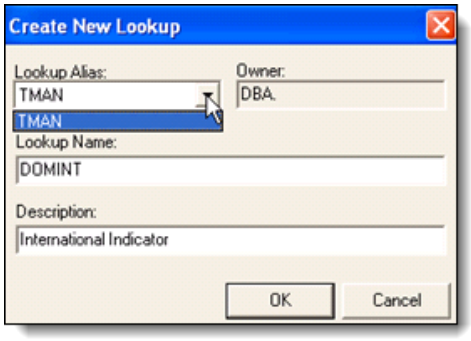
Building a Lookup Exercise

In this exercise you will build a Lookup (table) on the International Indicator (**IND025**). When you're finished, you'll be able to display the words Domestic and International in your reports just as easily but with more meaning than the D and I that reside in your database.

1. Select the **New** icon, and then **Lookup** from the drop-down list.



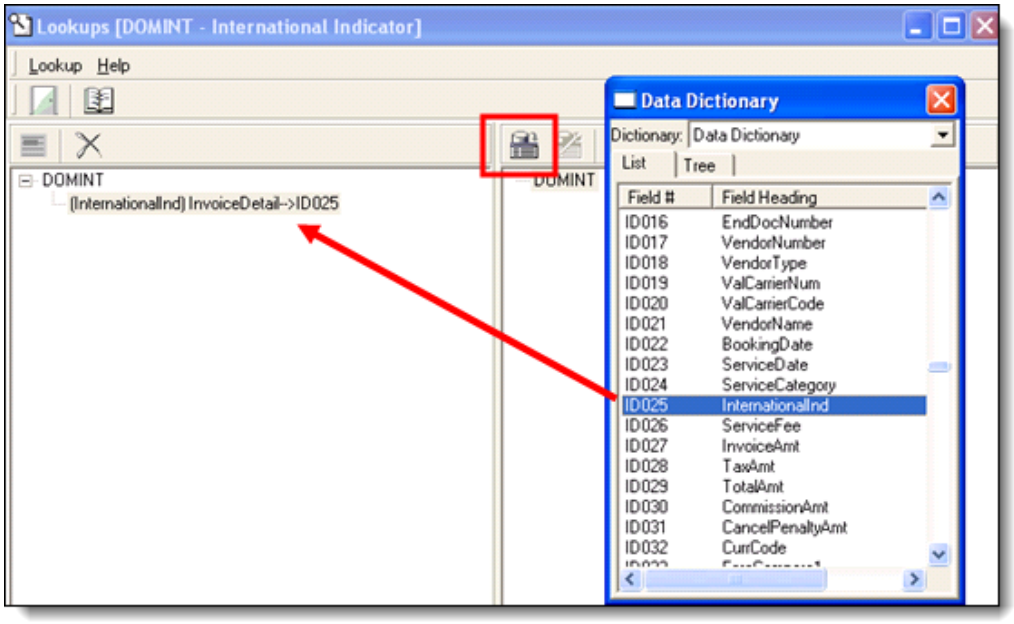
2. Using the drop-down-list, select the Alias associated to your database (usually TMAN).
3. In Lookup Name text box, type **DOMINT**.
4. Add a description: **International Indicator**.
5. Select **OK**.



Building a Lookup continued

6. Drag **ID025 - InternationalInd** to the left window.

7. Click the **Add values for the topmost field** icon.

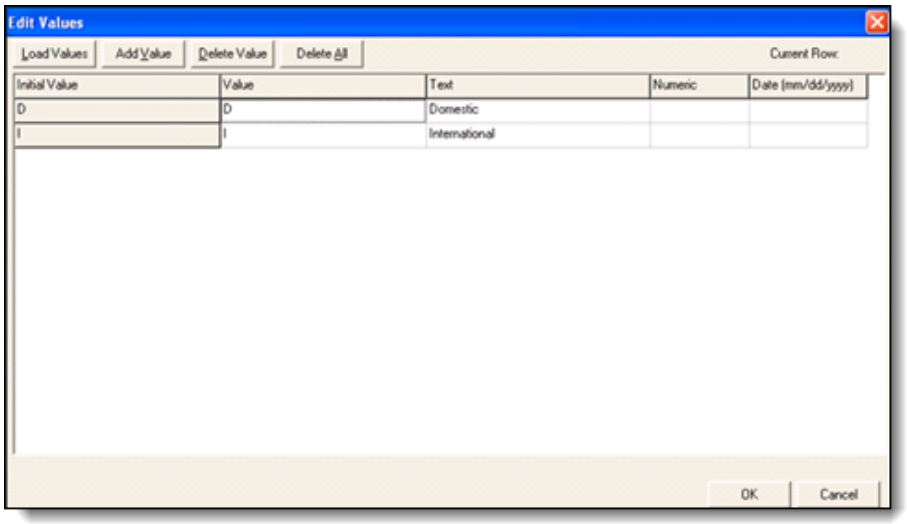


Add Values to Lookup

By selecting load values, you will retrieve a distinct list of values from the database that define the International Indicator. (A blank row can also be a value.)

8. Complete the Text column with **D** for **Domestic** and **I** for **International**.

9. Select **OK**.

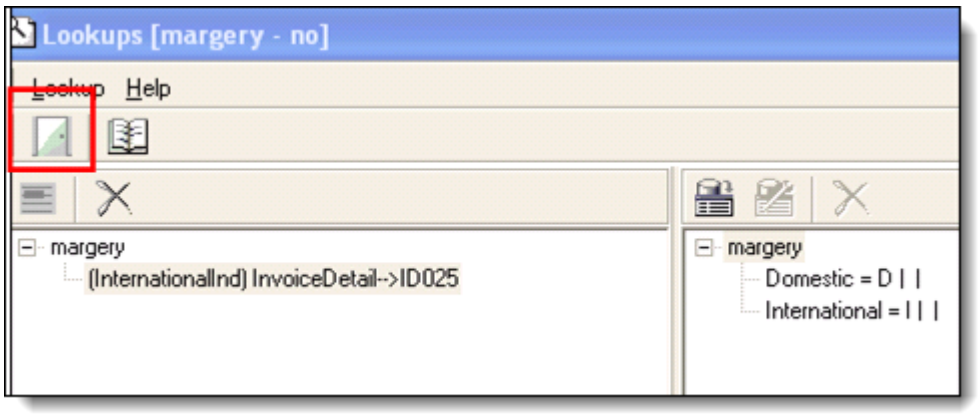


Building a Lookup continued

Completed Lookup

Your Lookup window should now look like the figure below.

10. Select the **Exit Lookups** icon to save your work and to return to the Main Menu.

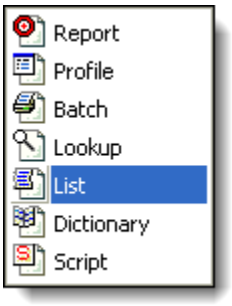


Lists

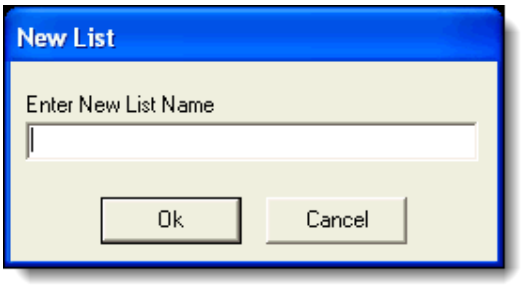
This option allows you to build a list of data that can be used to build SQL expressions. Lists can be used anywhere you enter a SQL expression such as Calculations or Filters in reports or in profiles. Please see the steps below to create a new list.

Build a List Exercise

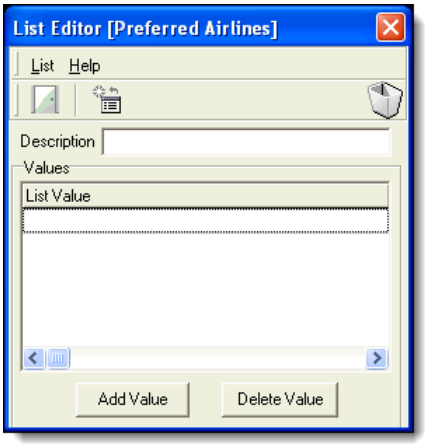
1. Select the New icon (or File – New) and select List.



2. Enter the name of the list (example: Preferred Airlines).

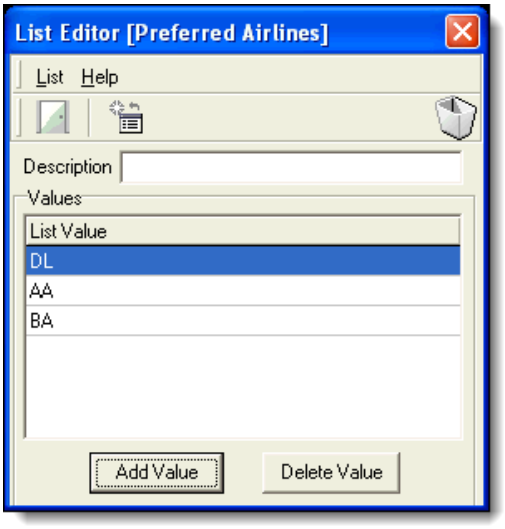


3. Enter a description of the list.



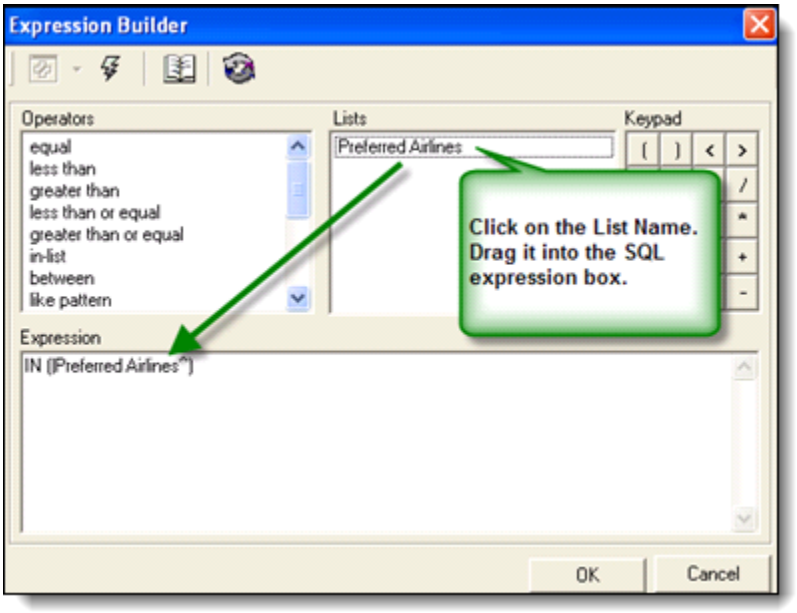
4. Click the **Add Value** button and enter one value. Repeat this step for every value that needs to be added.

5. When the list is complete, either click on List – Save, or click on the Exit List Editor button and it will prompt the user to save the list.



How to Use a List

To use the list, either within a calculation or a filter, you will have the Expression Builder box open. Enter the other parts of the SQL statement and then click on the name of the list and drag it into the expression box.



Reminder: You still have to create the rest of the SQL statement in the expression box. When you use a list, you're just inserting that list into your SQL statement instead of having to type it out manually.

Import/Export

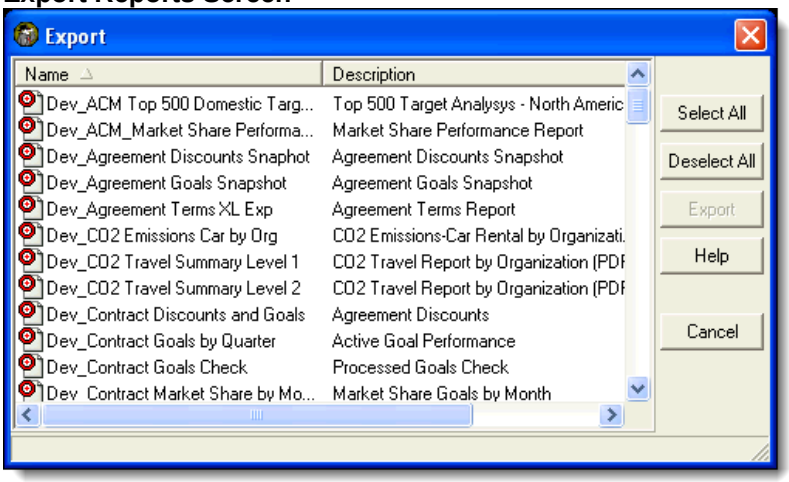
You can export or import reports, profiles, lookups, scripts, batches, lists, and dictionaries to/from your environment to another environment. External clients can use this to send TRX things that may not be working. We would then import them into our environment to see what the problem might be.

Export

You can export any object so that it can be transferred to someone else's TRAVELTRAX, or to create a back-up copy of reports, profiles, batches, etc.

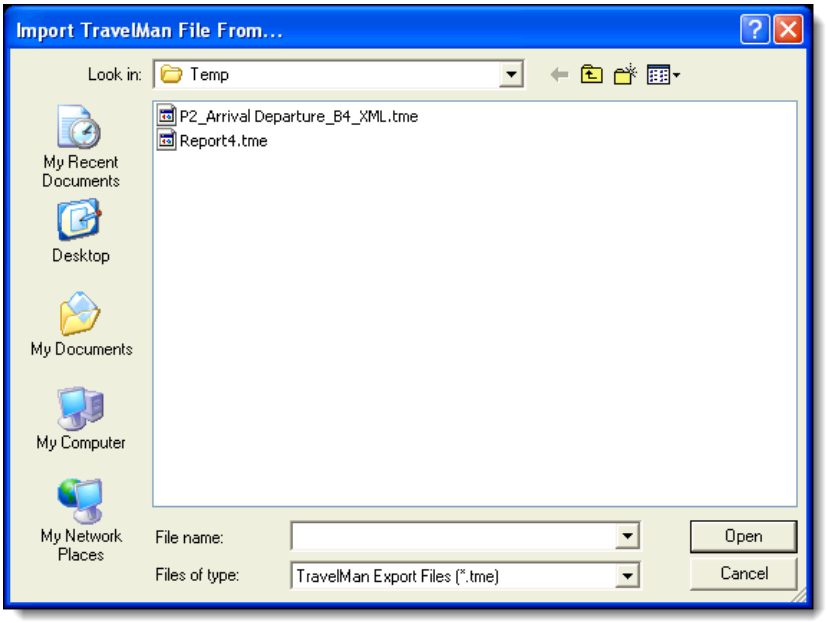
1. From the main menu, choose **Tools**.
2. Select **Export to XML** or **Export to Paradox.**
3. Select the type of object to be exported. You can also Select All to choose all objects.
4. Choose the item(s) to be exported.
5. Select the **Export** button. It will prompt you to choose a directory.

Export Reports Screen



Import

Choose this option to Import TRAVELTRAX Reports, Profiles, Batches, etc. that were exported from your or another person's copy of TRAVELTRAX. You must select the directory where the files are located before you can begin the import process.



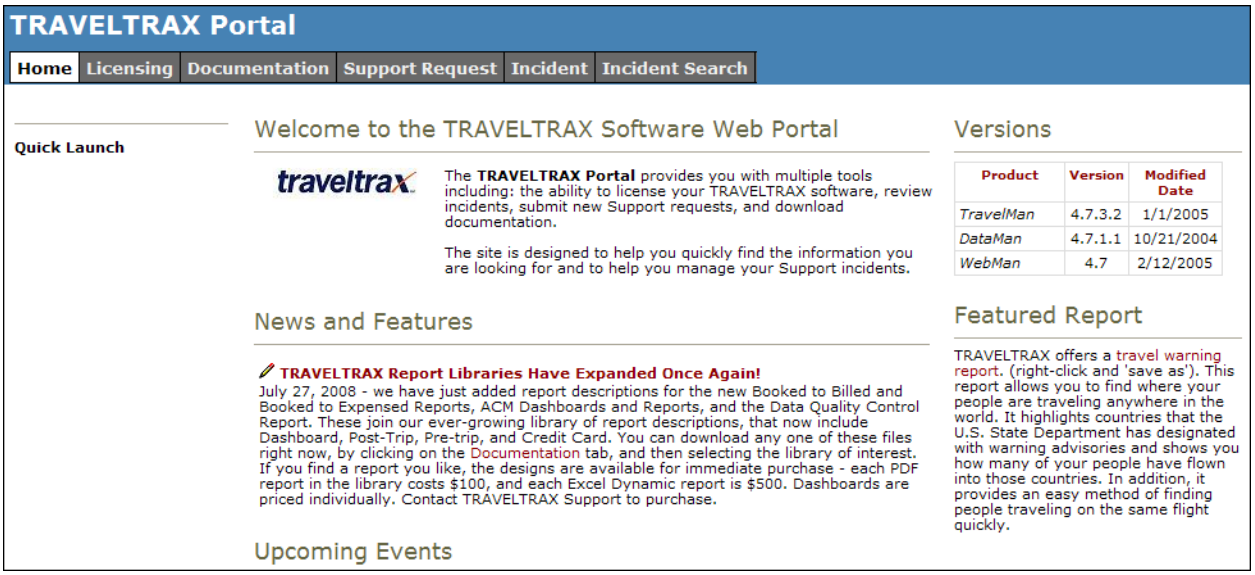
Portal

The TRAVELTRAX Portal gives you the ability to license your TRAVELTRAX software, review incidents, submit new Support requests, and download documentation.

The site is designed to help you quickly find the information you are looking for and to help you manage your Support incidents.

Home Page

The Homepage of the TRAVELTRAX Portal gives general information on TRAVELTRAX.

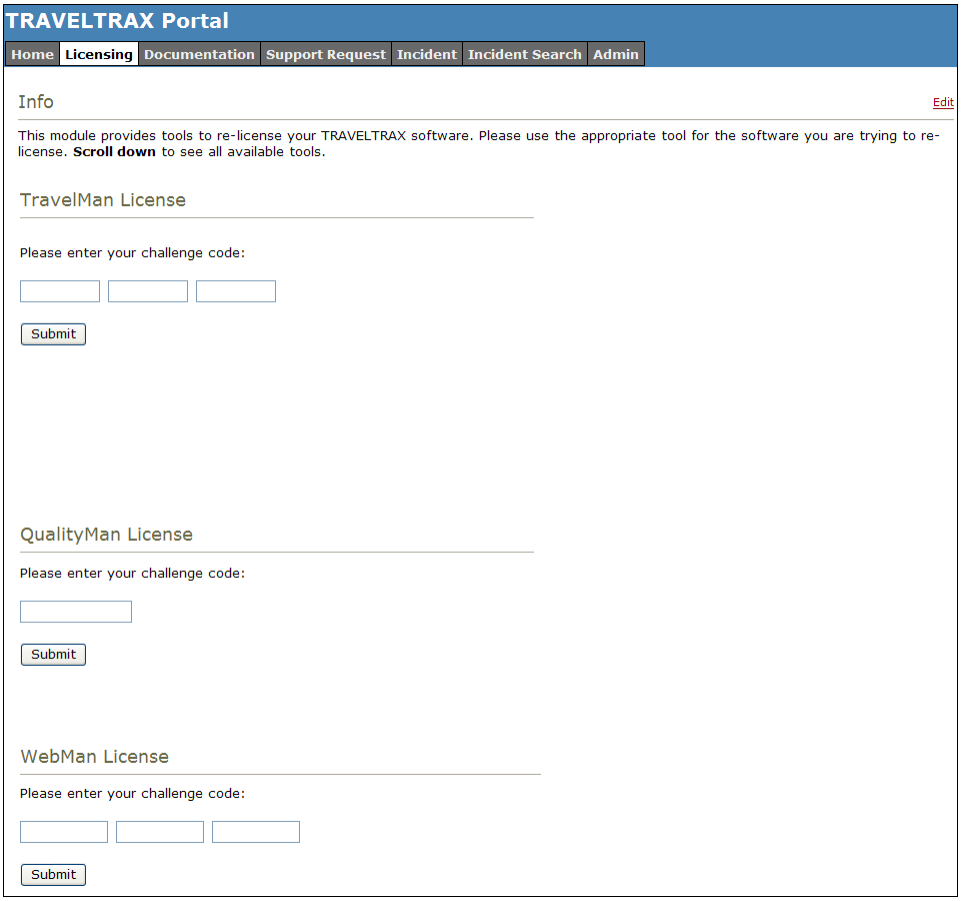

TRAVELTRAX Portal
Home
Licensing
Documentation
Support Request
Incident
Incident Search
Quick Launch
Welcome to the TRAVELTRAX Software Web Portal
The TRAVELTRAX Portal provides you with multiple tools including: the ability to license your TRAVELTRAX software, review incidents, submit new Support requests, and download documentation.
The site is designed to help you quickly find the information you are looking for and to help you manage your Support incidents.
Versions
Product
Version
Modified Date
TravelMan
4.7.3.2
1/1/2005
DataMan
4.7.1.1
10/21/2004
WebMan
4.7
2/12/2005
News and Features
TRAVELTRAX Report Libraries Have Expanded Once Again!
July 27, 2008 - we have just added report descriptions for the new Booked to Billed and Booked to Expensed Reports, ACM Dashboards and Reports, and the Data Quality Control Report. These join our ever-growing library of report descriptions, that now include Dashboard, Post-Trip, Pre-trip, and Credit Card. You can download any one of these files right now, by clicking on the Documentation tab, and then selecting the library of interest. If you find a report you like, the designs are available for immediate purchase - each PDF report in the library costs $100, and each Excel Dynamic report is $500. Dashboards are priced individually. Contact TRAVELTRAX Support to purchase.
Featured Report
TRAVELTRAX offers a travel warning report. (right-click and 'save as'). This report allows you to find where your people are traveling anywhere in the world. It highlights countries that the U.S. State Department has designated with warning advisories and shows you how many of your people have flown into those countries. In addition, it provides an easy method of finding people traveling on the same flight quickly.
Upcoming Events

Licensing

The licensing section allows you to re-license your TRAVELTRAX software. To use this tool, please follow the instructions below.

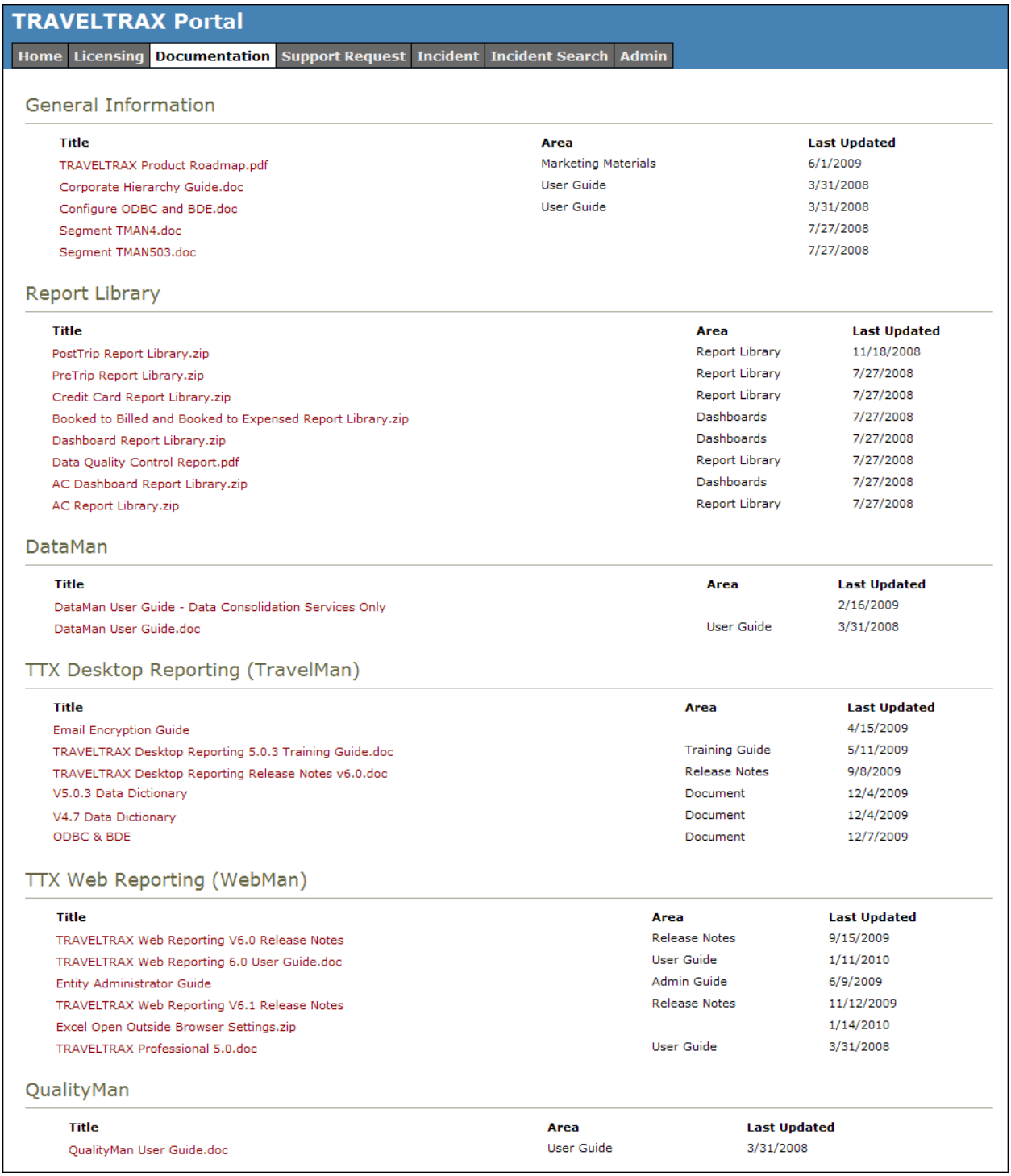
1. Click on the Licensing tab.
2. Get the challenge code from the software you need to re-license. Each piece of software below has a licensing option within the application. If your license has expired, you can click on that option and it will give you a challenge code.
3. Enter the challenge code in the appropriate section for the software you need to re-license.
   - TravelMan – Also known as TRAVELTRAX Desktop Reporting.
   - QualitMan – Also known as Data Quality Manager.
   - WebMan – Also known as TRAVELTRAX Web Reporting.

4. Click the **Submit** button under the correct section.



Documentation

In this section you will find documents that cover various TRAVELTRAX subjects. Click on the name of the document to download it.



TRAVELTRAX Portal

Home | Licensing | Documentation | Support Request | Incident | Incident Search | Admin

General Information

Title	Area	Last Updated
TRAVELTRAX Product Roadmap.pdf	Marketing Materials	6/1/2009
Corporate Hierarchy Guide.doc	User Guide	3/31/2008
Configure ODBC and BDE.doc	User Guide	3/31/2008
Segment TMAN4.doc		7/27/2008
Segment TMAN503.doc		7/27/2008

Report Library

Title	Area	Last Updated
PostTrip Report Library.zip	Report Library	11/18/2008
PreTrip Report Library.zip	Report Library	7/27/2008
Credit Card Report Library.zip	Report Library	7/27/2008
Booked to Billed and Booked to Expensed Report Library.zip	Dashboards	7/27/2008
Dashboard Report Library.zip	Dashboards	7/27/2008
Data Quality Control Report.pdf	Report Library	7/27/2008
AC Dashboard Report Library.zip	Dashboards	7/27/2008
AC Report Library.zip	Report Library	7/27/2008

DataMan

Title	Area	Last Updated
DataMan User Guide - Data Consolidation Services Only		2/16/2009
DataMan User Guide.doc	User Guide	3/31/2008

TTX Desktop Reporting (TravelMan)

Title	Area	Last Updated
Email Encryption Guide		4/15/2009
TRAVELTRAX Desktop Reporting 5.0.3 Training Guide.doc	Training Guide	5/11/2009
TRAVELTRAX Desktop Reporting Release Notes v6.0.doc	Release Notes	9/8/2009
V5.0.3 Data Dictionary	Document	12/4/2009
V4.7 Data Dictionary	Document	12/4/2009
ODBC & BDE	Document	12/7/2009

TTX Web Reporting (WebMan)

Title	Area	Last Updated
TRAVELTRAX Web Reporting V6.0 Release Notes	Release Notes	9/15/2009
TRAVELTRAX Web Reporting 6.0 User Guide.doc	User Guide	1/11/2010
Entity Administrator Guide	Admin Guide	6/9/2009
TRAVELTRAX Web Reporting V6.1 Release Notes	Release Notes	11/12/2009
Excel Open Outside Browser Settings.zip		1/14/2010
TRAVELTRAX Professional 5.0.doc	User Guide	3/31/2008

QualityMan

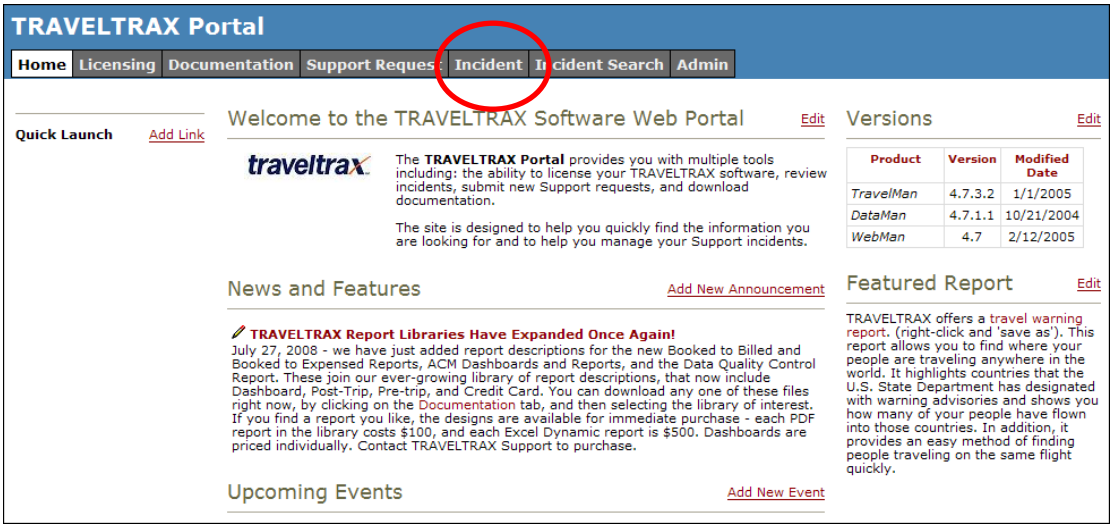
Title	Area	Last Updated
QualityMan User Guide.doc	User Guide	3/31/2008

Create a Support Request

Below are the steps to take when you need to create a TRAVELTRAX Incident/Ticket. These tickets should be created when you are having problems with any TRAVELTRAX application.

1. Access the TRAVELTRAX Portal: https://portal.traveltrax.com.

2. Enter your email address and password. This will display the TRAVELTRAX Portal home page.


TRAVELTRAX Portal
Home
Licensing
Documentation
Support Reques
Incident
cident Search
Admin
Quick Launch
Add Link
Welcome to the TRAVELTRAX Software Web Portal
Edit
The TRAVELTRAX Portal provides you with multiple tools including: the ability to license your TRAVELTRAX software, review incidents, submit new Support requests, and download documentation.
The site is designed to help you quickly find the information you are looking for and to help you manage your Support incidents.
Versions
Edit
Product
Version
Modified Date
TravelMan
4.7.3.2
1/1/2005
DataMan
4.7.1.1
10/21/2004
WebMan
4.7
2/12/2005
News and Features
Add New Announcement
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Edit
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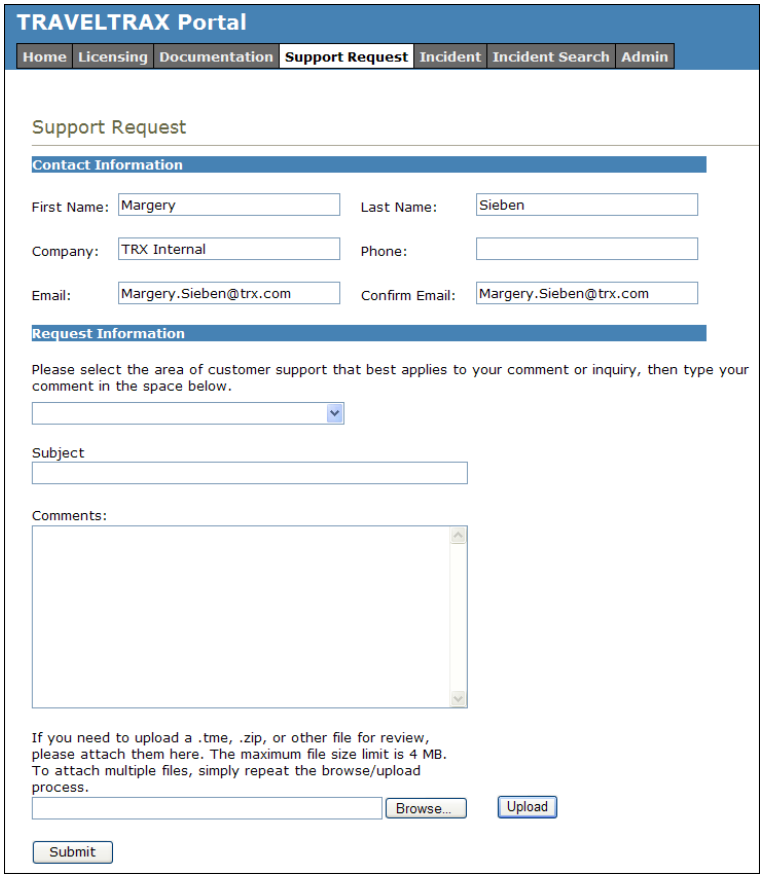
Upcoming Events
Add New Event

Create a Support Request continued

3. Click on the ***Support Request*** tab. This will display the Support Request page with your contact information pre-filled according to your login.
   - If any contact information needs to be changed, please make the changes in the appropriate boxes.

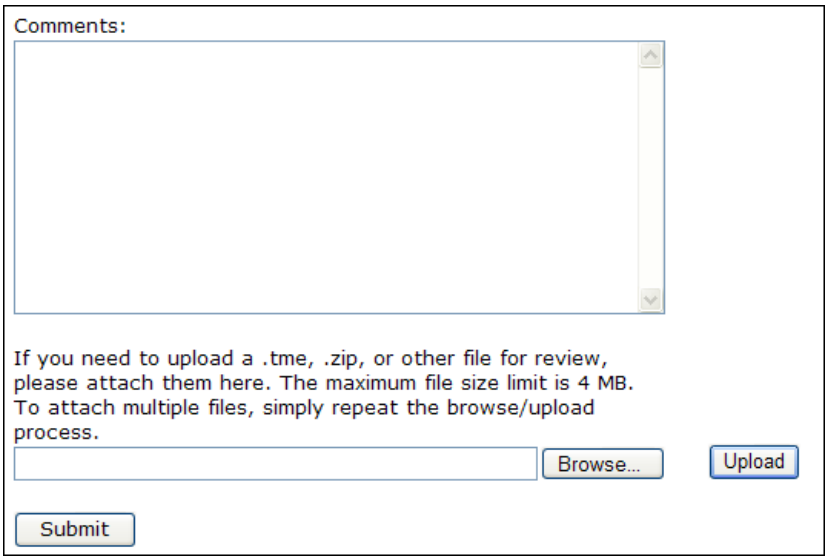


4. Click the drop down area and select the area of customer support that best applies to your situation.

5. Enter the subject for your support request.

Create a Support Request continued

6. Enter a summary of your problem/issue in the Comments' box. Put in as much detail as possible so the problem can be researched and resolved.


Comments:
If you need to upload a .tme, .zip, or other file for review, please attach them here. The maximum file size limit is 4 MB. To attach multiple files, simply repeat the browse/upload process.
Browse...
Upload
Submit

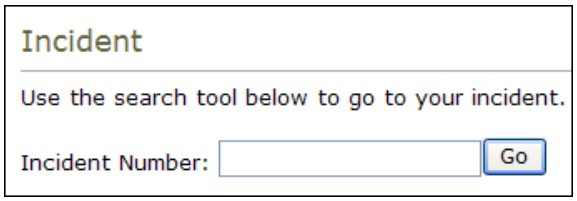
7. If more detail is needed (such as screenshots, word documents, etc.), please enter the file(s) by clicking on the **Browse** button, selecting the file(s) and clicking the **Upload** button.

8. Once all information is entered, click on the **Submit** button. The Support Request will automatically be sent to the TRAVELTRAX helpdesk and research will begin.

View an Incident

Once a support request form has been entered, the user may check the status of the incident by following the steps below:

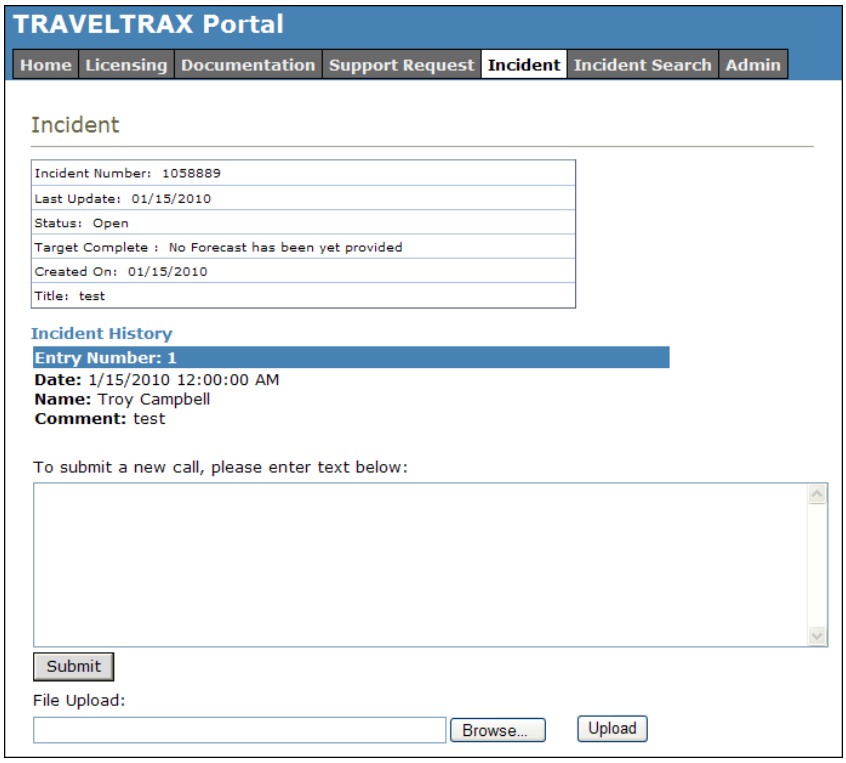
1. Click on the ***Incident*** tab.



2. Enter the Incident number.

3. Click on the ***Go*** button. This will display the incident information which includes the following:

   - The date this incident was last updated.
   - The status of this incident.
   - The target completion date or comments.
   - The date this incident was created.
   - The title of the incident when it was submitted.
   - The incident history
     - The date and time the incident was last updated by anyone.
     - The name of person that last updated the incident.
     - Comments entered the last time the incident was updated.



Search for an Incident

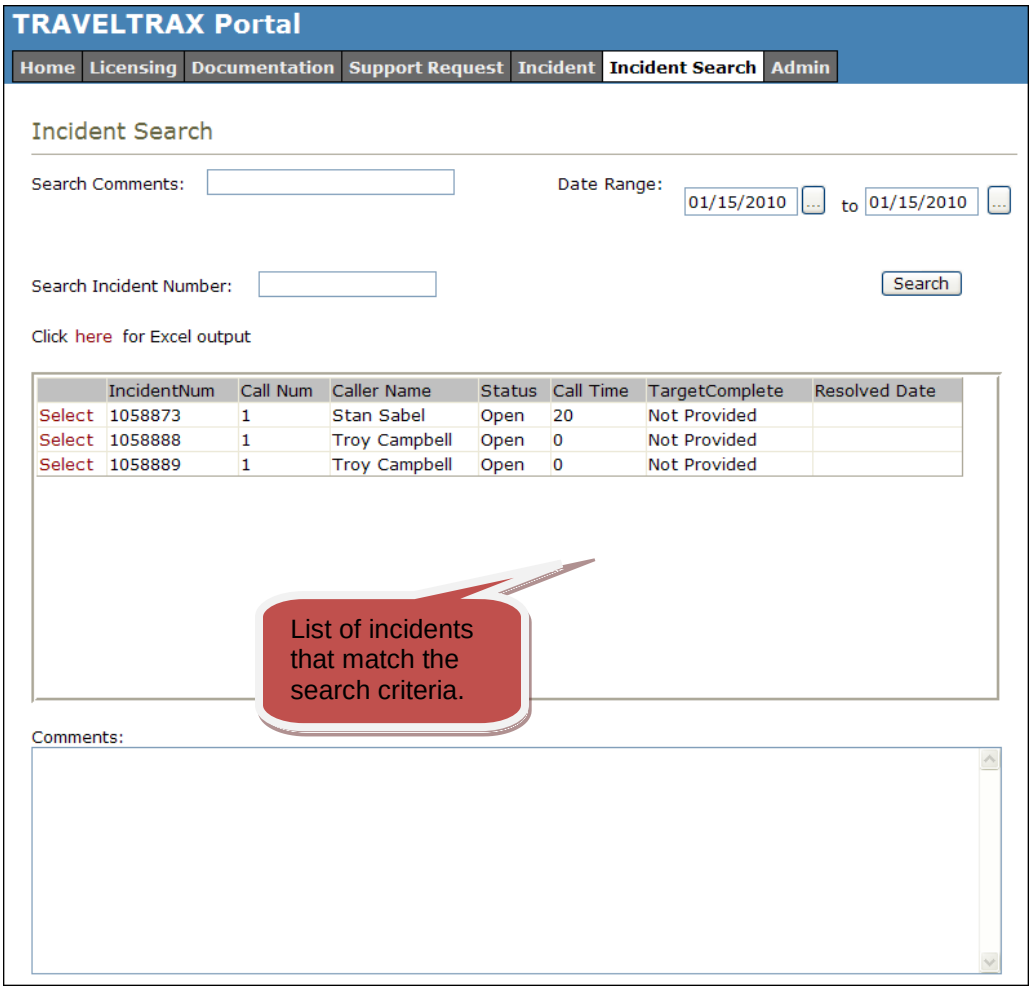
If you do not have the incident number, you can search for any incidents that have been created by anyone in your company. Follow the steps below to search for an incident:

1. Click on the ***Incident Search*** tab.

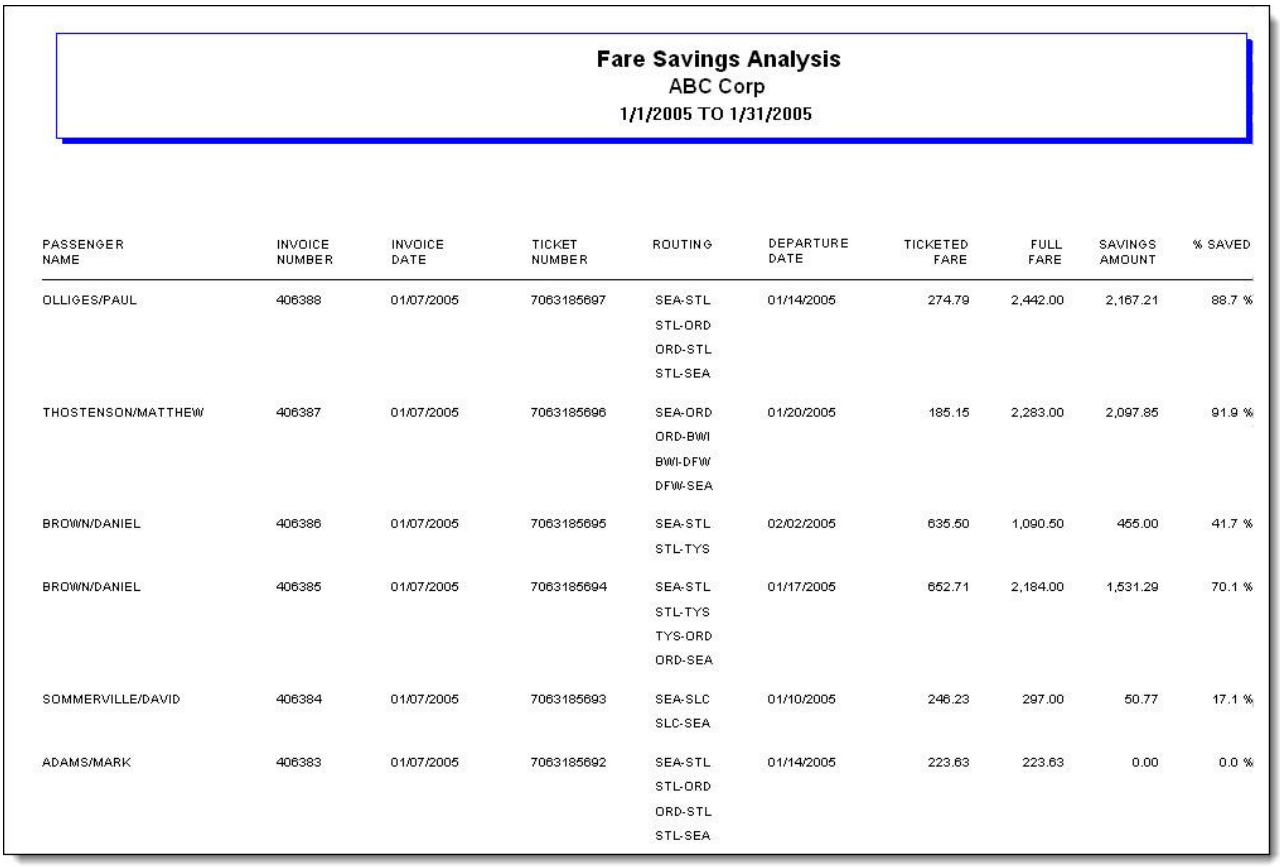
2. Enter one or more of the following (this will depend on what information you have to search with/for):

   - **Search Comments** – enter the search comments to pull up an incident that includes those comments.
   - **Date Range** – enter a date range (start & end date). This will search for incidents that were created by someone in your company within those dates.
   - **Search Incident Number** – enter the incident number if you have it.

3. Click on the ***Search*** button. This will display the incident or a list of incidents that match the search criteria.



Report Examples



Fare Savings Analysis
ABC Corp
1/1/2005 TO 1/31/2005

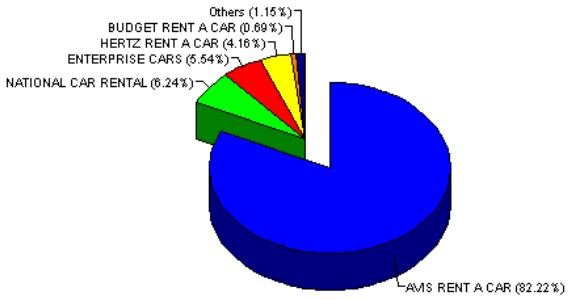
PASSENGER NAME	INVOICE NUMBER	INVOICE DATE	TICKET NUMBER	ROUTING	DEPARTURE DATE	TICKETED FARE	FULL FARE	SAVINGS AMOUNT	% SAVED
OLLIGES/PAUL	406388	01/07/2005	7063185697	SEA-STL STL-ORD ORD-STL STL-SEA	01/14/2005	274.79	2,442.00	2,167.21	88.7 %
THOSTENSON/MATTHEW	406387	01/07/2005	7063185696	SEA-ORD ORD-BWI BWI-DFW DFW-SEA	01/20/2005	185.15	2,283.00	2,097.85	91.9 %
BROWN/DANIEL	406386	01/07/2005	7063185695	SEA-STL STL-TYS	02/02/2005	635.50	1,090.50	455.00	41.7 %
BROWN/DANIEL	406385	01/07/2005	7063185694	SEA-STL STL-TYS TYS-ORD ORD-SEA	01/17/2005	652.71	2,184.00	1,531.29	70.1 %
SOMMERVILLE/DAVID	406384	01/07/2005	7063185693	SEA-SLC SLC-SEA	01/10/2005	246.23	297.00	50.77	17.1 %
ADAMS/MARK	406383	01/07/2005	7063185692	SEA-STL STL-ORD ORD-STL STL-SEA	01/14/2005	223.63	223.63	0.00	0.0 %

Top Car Rental Vendors

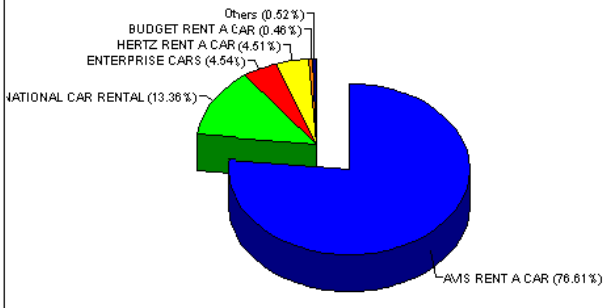
TRX
11/1/2007 TO 11/30/2007

Margery
Thursday, August 20, 2009

TOTAL DAYS RENTED



TOTAL AMOUNT SPENT



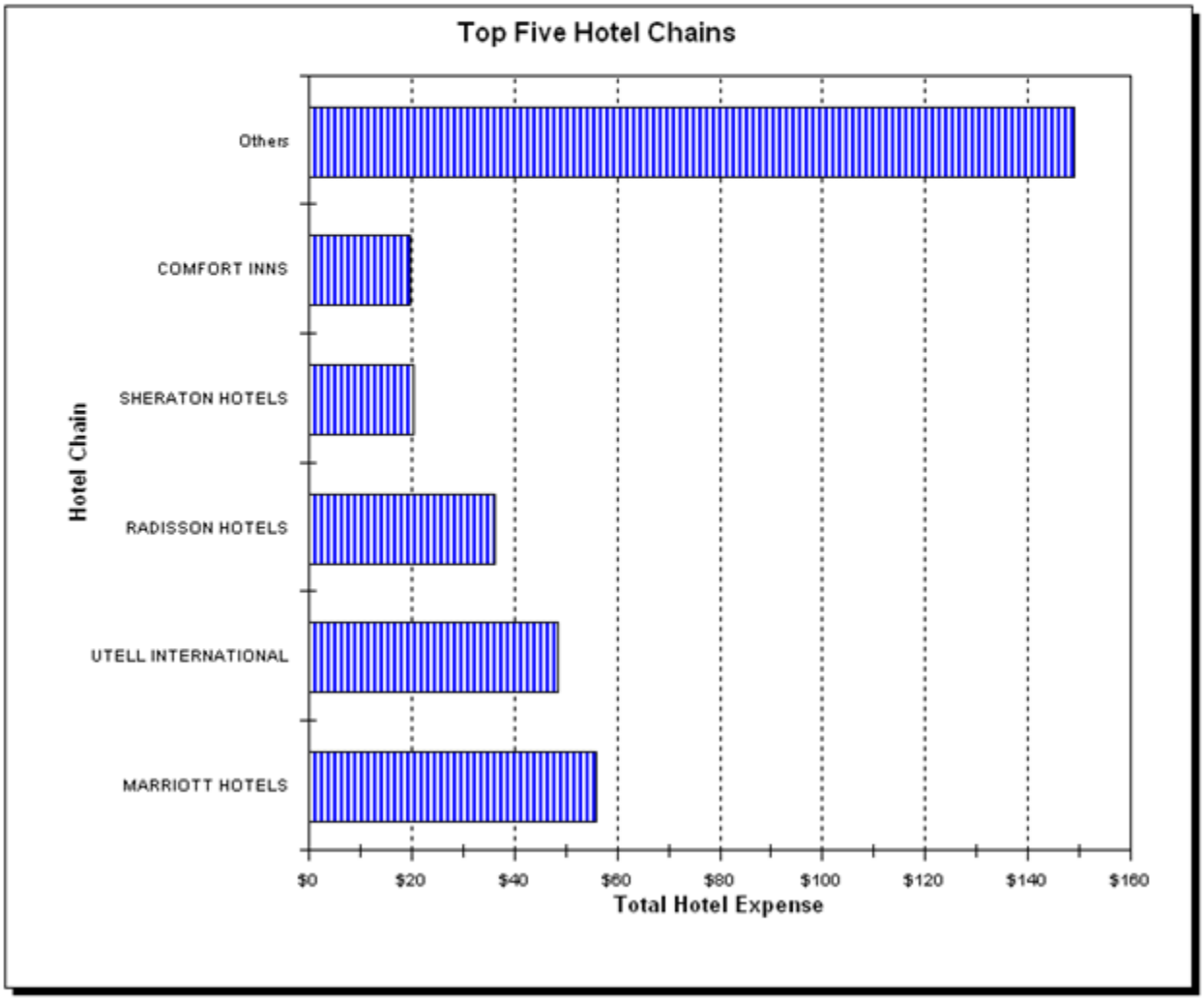
RANK	CHAIN	CAR BOOKINGS	% OF BOOKINGS	# OF DAYS	% OF CAR DAYS	AVG CAR DAYS	TOTAL CAR COST	AVERAGE RATE	% CAR COST
1	AVIS RENT A CAR	109	82.0 %	356	82.2 %	3.27	$65.87	$0.19	76.6 %
2	NATIONAL CAR RENTAL	9	6.8 %	27	6.2 %	3.00	$11.49	$0.43	13.4 %
3	ENTERPRISE CARS	3	2.3 %	24	5.5 %	8.00	$3.90	$0.16	4.5 %
4	HERTZ RENT A CAR	8	6.0 %	18	4.2 %	2.25	$3.88	$0.22	4.5 %
5	BUDGET RENT A CAR	2	1.5 %	3	0.7 %	1.50	$0.39	$0.13	0.5 %
6	OTHERS	2	1.5 %	5	1.2 %	2.50	$0.45	$0.09	0.5 %
	TOTAL	133	100.0 %	433	100.0 %	3.26	$85.98	$0.20	100.0 %

Hotel Ranking Report

TRX
11/1/2007 TO 11/30/2007

Margery
Friday, August 21, 2009

RANKING	HOTEL CHAIN	HOTEL EXPENSE	ROOMS	NIGHTS	$ AMT % TO TOTAL
1	MARRIOTT HOTELS	$56.05	31	66	17.0 %
2	UTELL INTERNATIONAL	$48.38	11	48	14.7 %
3	RADISSON HOTELS	$36.09	15	51	11.0 %
4	SHERATON HOTELS	$20.37	11	36	6.2 %
5	COMFORT INNS	$19.66	17	68	6.0 %
6	OTHERS	$148.87	121	296	45.2 %
REPORT TOTAL		$329.41	206	565	100.0 %



Executive Travel Summary

TRX

Margery

Friday, August 21, 2009

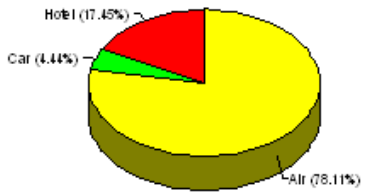
AIR SUMMARY	MTD Dates Tickets	Segments	Total $	Avg Tkt	YTD Dates Tickets	Segments	Total $	Avg Tkt
	352	1179	$1,279.33	$3.63	5155	13824	$2,680,438.60	$519.97
AMERICAN	149	453	$393.99	$2.64	1763	5400	$754,381.60	$427.90
NORTHWEST AIR	40	136	$334.65	$8.37	442	1505	$572,414.25	$1,295.05
DELTA AIRLINES	68	250	$240.93	$3.54	782	2881	$410,874.74	$525.42
UNITED AIRLINES	25	85	$215.85	$8.63	289	968	$374,605.08	$1,296.21
US AIRWAYS	70	255	$93.91	$1.34	849	3070	$176,776.04	$208.22
Others					1030		$391,386.87	$379.99

HOTEL SUMMARY	Bookings	Nights	Total $	Avg Night	Bookings	Nights	Total $	Avg Night
	85	269	$180.54	$0.67	2467	6609	$598,708.35	$90.59
MARRIOTT HOTELS	31	66	$56.05	$0.85	364	777	$101,856.24	$131.09
UTELL INTERNATIONAL	11	48	$48.38	$1.01	124	539	$82,857.90	$153.73
RADISSON HOTELS	15	51	$36.09	$0.71	176	594	$63,797.30	$107.40
SHERATON HOTELS	11	36	$20.37	$0.57	128	419	$36,843.51	$87.93
COMFORT INNS	17	68	$19.66	$0.29	202	783	$35,302.58	$45.09
Others					1473	3497	$278,050.82	$79.51

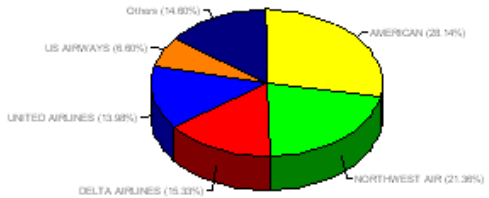
AUTO SUMMARY	Bookings	Days	Total $	Avg Day	Bookings	Days	Total $	Avg Day
	130	428	$85.58	$0.20	1551	4957	$152,274.29	$30.72
AVIS	109	356	$65.87	$0.19	1266	4059	$116,437.39	$28.69
NATIONAL	9	27	$11.49	$0.43	97	293	$19,430.68	$66.32
HERTZ	8	18	$3.88	$0.22	109	247	$8,220.84	$33.28
ENTERPRISE	3	24	$3.90	$0.16	34	268	$6,779.61	$25.30
THRIFTY	1	3	$0.45	$0.15	11	33	$746.75	$22.63
Others					34	57	$659.02	$11.56

Note: Rankings are based on Year-to-Date Totals

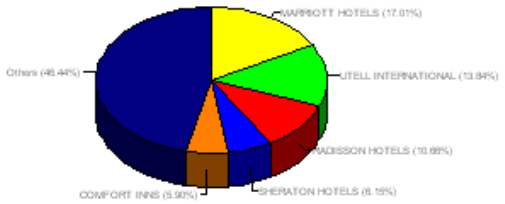
Expense Summary
Year-to-Date



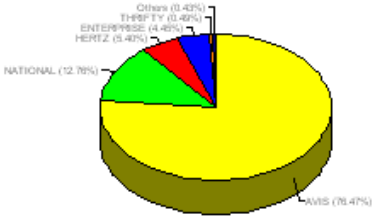
Top 5 Airline
Year-to-Date



Top 5 Hotels
Year-to-Date



Top 5 Cars
Year-to-Date



III-MARK SOFTWARE

XRGC01

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